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APRIL 1947

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Inquiries should be addressed to Bureau of Labor Statistics
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MONTHLY **LABOR REVIEW**

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

..... + LAWRENCE R. KLEIN, Editor +

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W. E. B. DUBOIS

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PART 1.—LABOR IN CALIFORNIA AND PACIFIC NORTHWEST

Introduction

California and the Pacific Northwest States are peculiarly well adapted to intensive study with respect to their labor economics, as the ensuing articles reveal. The 10 articles comprising this specialized issue are, in the main, written against the background of three questions: What happened during the war? What was the effect of reconversion? What are the most likely future economic trends?

In terms of problems, war production and reconversion affected in varying degrees and in varying ways all facets of the area's economy: e. g., capital equipment, agriculture, union organization, wages, employment, and composition of the labor force. Classic examples of wartime expansion of plant capacity, production, and employment are the aircraft and shipbuilding industries. In some instances, such as in population growth, the war merely intensified well-established prewar trends. The heights to which employment in the three States rose in the first half of the forties led many to predict dire consequences in terms of unemployment and its effects when war production ceased. But the essential symptoms of the area's basic economic metabolism point in the other direction.

It is easy to pose questions and propound problems. The answers and the analyses are more difficult. It appeared that some of these could best be handled by competent persons resident in and familiar with the locale of the study. Accordingly the Bureau of Labor Statistics enlisted the assistance of three labor economists who are outstanding in their respective fields. They are M. I. Gershenson, chief of the Division of Labor Statistics and Research of the California Department of Industrial Relations, who contributed the article on Wartime and Postwar Employment Trends in California; Nathanael H. Engle, of the University of Washington, who wrote on the Pacific Northwest Economic Outlook—1947; and Clark Kerr, of the University of California, the author of *Collective Bargaining on the Pacific Coast*. The Bureau is grateful for their cooperation.

For the most part, the specialized articles treat California and the Pacific Northwest States of Washington and Oregon as two separate areas. With two exceptions, these three States form the bases for the several articles. Professor Engle's article includes the State of Idaho and 10 counties of Montana. The article on postwar wage developments includes the State of Nevada.

This is the third specialized issue of the Monthly Labor Review. In the July 1946 issue the problem [of reconversion in New England was discussed; in the October 1946 issue, seven articles were published under the general heading of Labor in the South. From time to time, other specialized issues will appear, dealing with economic-geographic areas or with some single problem or related problems of labor economics.

Mary N. Hilton, of the Bureau's Wage Analysis Branch, had the major editorial responsibility for the 10 specialized articles; and credit for assistance in planning the issue and for liaison work with the authors, as well as for the considerable task of integrating the material, is hers. William A. Bledsoe, Regional Director for the Bureau in San Francisco, originally suggested the issue and aided in the planning.

—L. R. K.

Prospective Labor Supply on the West Coast¹

THE WARTIME EXPANSION of labor supply on the West Coast was unprecedented in the region's long history of rapid labor-force growth. Though the gains in California were the most spectacular, exceptional increases in the working populations of Oregon and Washington also took place.² A determination of the probable degree of permanency of this unusual labor-force growth and of future labor-supply prospects is fundamental to any appraisal of the economic outlook for the Pacific Coast region. The present article analyzes war and prewar labor-force developments in the region and presents estimates of prospective labor supply in 1950³ (see table 3, p. 571). These are supplemented by information on the basic socio-economic characteristics of the West Coast work force.

Sources of Wartime Labor Supply

The projects initiated under the National Defense Program, followed by World War II, greatly accelerated the expansion of labor supply in the Pacific Coast region. Between 1940 and 1945 the labor force⁴ for the three Far Western States expanded by 1,591,000, to a total of 5,859,000. This increase in working population, during a 5-year period, was substantially larger than any of the great spurts in West Coast labor supply that occurred during 10-year periods between 1870 and 1940. The largest previous expansion took place between 1920 and 1930 and amounted to 1,162,000 (see table 1).

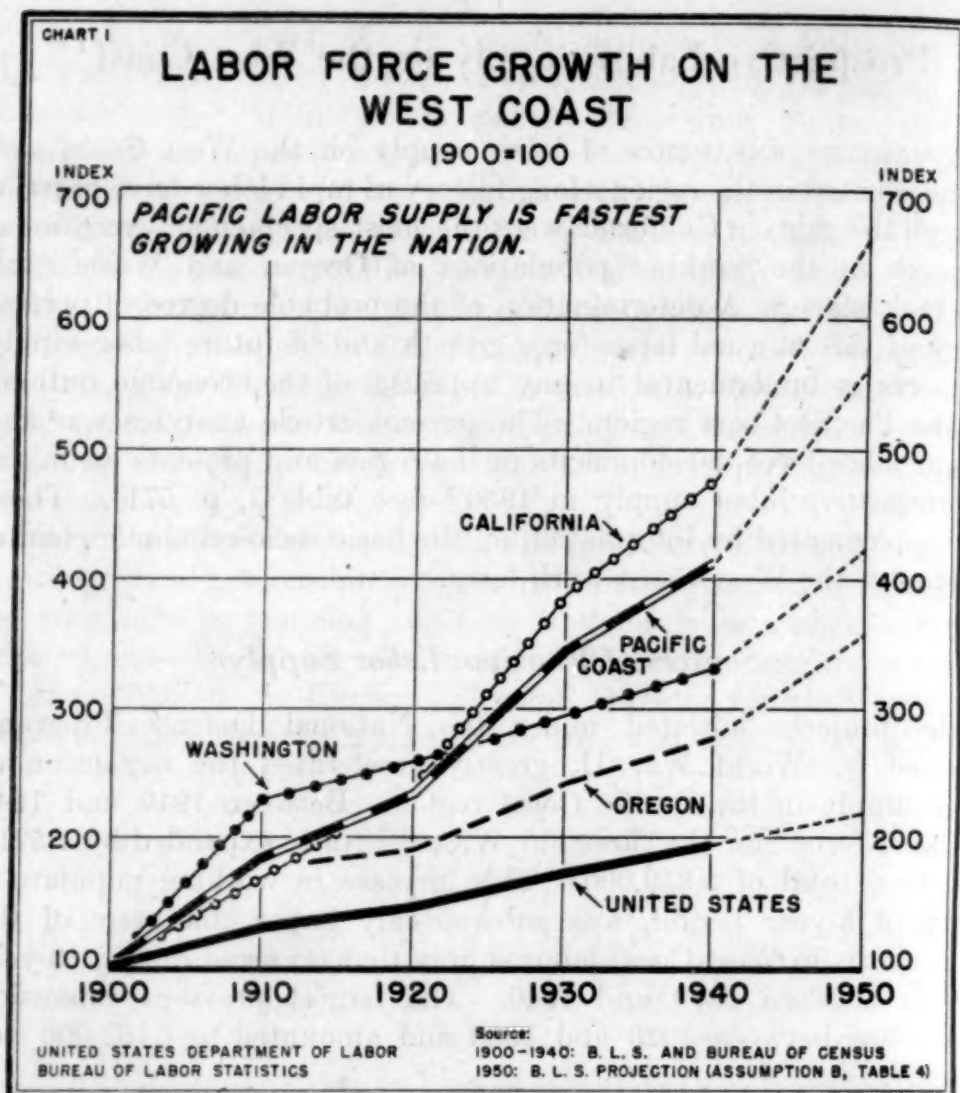
In war, as in peace, the Pacific Coast had the fastest growing work force in the Nation (see chart 1). The expansion of 37 percent in the region's labor supply between 1940 and 1945 was nearly double the rate of increase for the country as a whole (table 2). The increase in every section of the country during the war was significant, but the gains, except for the West Coast, did not range higher than between 15 and 24 percent.

¹ Prepared by Lester M. Pearlman, under the direction of Leonard Eskin, in the Bureau's Occupational Outlook Division.

² See articles on Wartime and Postwar Employment Trends in California and on Employment in the Northwest in this issue.

³ Source of data on labor-force changes since 1940, unless otherwise indicated, is Bureau of Labor Statistics Bulletin No. 893, *State and Regional Variations in Prospective Labor Supply* (reprinted from *Monthly Labor Review*, December 1946, with additional data).

⁴ The labor force includes all civilians 14 years of age and over, who are working or seeking work and members of the armed forces.



Although nearly three-fourths of the gain in labor force on the West Coast during the war took place in California, the percentage increase in that State was somewhat smaller than in Washington, and only moderately larger than in Oregon. High wartime demands for labor, particularly in the aircraft and shipbuilding industries, brought thousands of workers into the labor market of each of the West Coast States. It is significant that 5 out of 10 areas which were selected for special census studies by the President's Committee for Congested Production Areas were on the Pacific Coast. The urban areas surveyed by the Census Bureau in order to indicate the strain being put upon facilities and resources in areas of unusual wartime activity, included Los Angeles, Portland-Vancouver, Puget Sound, San Diego, and San Francisco Bay.⁵

⁵ See Bureau of the Census, Population, Series CA, Washington, 1944. The other 5 congested production areas were Charleston (S. C.), Detroit-Willow Run, Hampton Roads, Mobile, and Muskegon.

TABLE 1.—Population and labor-force growth in the United States and the Pacific Coast Region, 1870-1940¹

[In thousands]

Year	United States		Pacific		California		Oregon		Washington	
	Popu- lation	Labor force ²	Popu- lation	Labor force ²	Popu- lation	Labor force ²	Popu- lation	Labor force ²	Popu- lation	Labor force ²
1870.....	38,558	12,146	675	278	560	238	91	30	24	10
1880.....	50,156	16,848	1,115	471	865	374	175	67	75	30
1890.....	62,622	22,338	1,871	833	1,208	543	314	126	349	164
1900.....	75,995	28,283	2,417	1,035	1,485	642	414	169	518	224
1910.....	91,972	³ 36,633	4,192	³ 1,905	2,377	³ 1,090	673	³ 301	1,142	³ 514
1920.....	105,711	41,236	5,567	2,410	3,427	1,510	783	322	1,357	578
1930.....	122,775	48,595	8,194	3,572	5,677	2,499	954	409	1,563	664
1940.....	131,660	⁴ 54,778	9,733	⁴ 4,268	6,907	⁴ 3,056	1,090	⁴ 470	1,736	⁴ 742

¹ Adapted from decennial censuses, 1870 to 1940, Bureau of the Census, Washington, D. C.² Data refer to persons 14 years of age and over. Figures for years earlier than 1940 refer to "gainful workers"; i. e., persons usually employed in a gainful occupation; figures for 1940 refer to "labor force", persons working or seeking work during the week ending Mar. 30, 1940. These concepts are broadly comparable, and, for purposes of this article, are considered under the general term "labor force." The labor force includes members of the armed forces.³ Adjusted data for 1910 are adapted from the Sixteenth Census Population report, Comparative Occupation Statistics for the United States, 1870 to 1940, Bureau of the Census, Washington, D. C., 1943.⁴ Preliminary, pending release of Census official estimate of United States total on basis comparable with current census series.

TABLE 2.—Sources of wartime labor supply, by major geographic division, April 1940 to April 1945

[In thousands]

Division or State ¹	Labor force ²		Change—1940 to 1945				In per- cent
	1940	1945	In number (total)	Caused by—			
				Inter- state migra- tion	Partici- pation of "extra" workers	Natural popula- tion growth	
United States.....	54,778	65,986	11,208	-----	7,986	3,222	20.5
Pacific.....	4,268	5,859	1,591	847	652	92	37.3
California.....	3,056	4,207	1,151	662	422	67	37.7
Oregon.....	470	624	154	68	76	10	32.8
Washington.....	742	1,028	286	117	154	15	38.5
Mountain.....	1,580	1,848	268	-29	186	111	17.0
West South Central.....	5,004	6,087	1,083	-281	935	429	21.6
East South Central.....	4,050	4,705	655	-320	580	395	16.2
South Atlantic.....	7,249	8,868	1,619	57	855	707	22.3
West North Central.....	5,418	6,281	863	-427	1,040	250	15.9
East North Central.....	11,203	13,883	2,680	270	1,920	490	23.9
Middle Atlantic.....	12,249	14,069	1,820	-164	1,416	568	14.9
New England.....	3,757	4,386	629	47	402	180	16.7

¹ The States included in divisions other than the Pacific are as follows: *Mountain Division*—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada; *West South Central Division*—Arkansas, Louisiana, Oklahoma, and Texas; *East South Central Division*—Kentucky, Tennessee, Alabama, and Mississippi; *South Atlantic Division*—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida; *West North Central Division*—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; *East North Central Division*—Ohio, Indiana, Illinois, Michigan, and Wisconsin; *Middle Atlantic Division*—New York, New Jersey, and Pennsylvania; *New England Division*—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.² Preliminary, pending release of Census official estimate of United States total, on basis comparable with current Census series. Labor force includes persons 14 years of age and over working or seeking work and members of the armed forces.

The unusual manpower requirements of West Coast industry during the war were met primarily by the inflow of workers migrating from other regions and by the added participation of housewives, students, retired men, and other "extra" workers who ordinarily would have been outside the labor market. Approximately 847,000 workers came from other sections of the country to find jobs on the West Coast; in addition, some 652,000 extra wartime workers were drawn from the resident population into the labor force. These groups, supplemented by approximately 92,000 new entries that were added as the result of natural population growth and long-term trends in labor-market participation, accounted for the Pacific Coast's total labor-force expansion of 1,591,000 during the war. The part played by each of these sources of wartime labor supply in each Pacific Coast State is summarized in table 2.

MIGRATION

The West Coast has characteristically been an importer of labor. Large-scale migration westward has been the most important factor underlying the rapid population and labor-force growth of the region. Between 1920 and 1930, the gain was 1,620,000 persons through population exchanges with other regions. The westward movement slackened somewhat during the depression years of the 1930's, but the Pacific States showed a net gain of 1,300,000 persons during that decade. Expanding employment opportunities between 1940 and 1945 brought net in-migration to the region to a total of 1,984,000, including the 847,000 workers previously mentioned. These migration figures exclude any members of the armed forces from other regions who may have had plans to settle on the West Coast after their discharge.

The large majority of the migrants to the West Coast during the war located in California, but substantial numbers settled in Washington and Oregon. Most of the newcomers came from the Central farm belt stretching from North Dakota and Minnesota in the North to Texas and Louisiana in the South. The wartime population movements between major geographic divisions of the United States closely followed the pattern of prewar migration, as shown by the tabulation following. (See also chart 2.)

The wartime movement of people within the Pacific Coast region, particularly from rural to industrial areas, was also highly significant, though far less publicized than the migration over longer distances. Indirect evidence of the magnitude of rural to urban shifts within the Pacific States is found in the fact that internal migration in the West (including the Mountain States) reached record volumes during the

war. Migration within States located in the West totaled 950,000 between December 1941 and March 1945,⁶ while migration across State lines within the region amounted to 770,000.⁷ Moreover, 1 out of 4 migrants into the congested production areas on the West Coast between 1940 and 1944, came from within the Pacific region itself.

Region and division	Net migration (in thousands) ¹	
	1935-40 (total)	1940-45 (civilians)
West.....	887	1, 915
Pacific.....	822	1, 984
California.....	665	1, 551
Washington.....	80	273
Oregon.....	77	160
Mountain.....	65	- 69
South.....	-272	-1, 274
West South Central.....	-270	- 657
East South Central.....	-195	- 751
South Atlantic.....	193	134
North.....	-615	- 641
West North Central.....	-509	-1, 000
East North Central.....	41	632
Middle Atlantic.....	-131	- 383
New England.....	-16	110

¹ Source of 1935-40 data, Bureau of the Census, 16th Census of the United States, 1940, Population, Internal Migration 1935-40, Color and Sex of Migrants, Washington, 1943; 1940-45 data, Bureau of the Census, Population, Special Report P-46, No. 3 (adjusted to exclude immigrants from other countries), Washington, 1946.

EXTRA WARTIME WORKERS

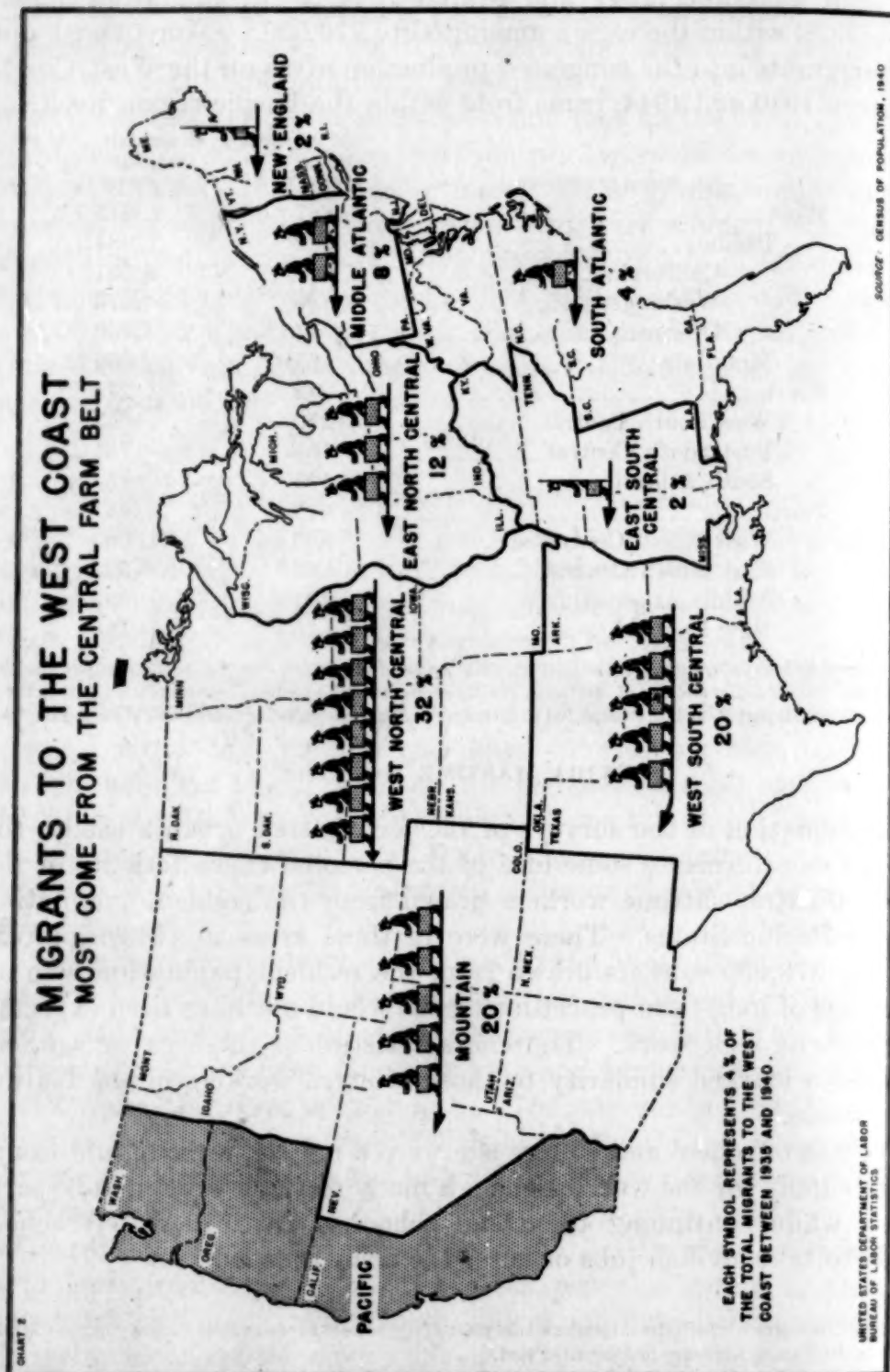
Examination of the surveys of the 5 congested urban areas on the West Coast furnishes some idea of the personal characteristics of the 652,000 extra wartime workers drawn from the resident population of the Pacific States. There were in these areas in 1944, approximately 378,000 workers drawn from the resident population who on the basis of long-term peacetime trends would not have been expected to work or seek work. The characteristics of these extra workers showed a marked similarity to those of extra workers in the Nation as a whole.⁸

Youths of school and college age were a major source of additional labor supply for the war. Although many of these worked only part-time, while continuing to attend school, many others left school early to take civilian jobs or enter the armed forces.

⁶ Intrastate migration includes migrants whose place of residence was in a different county but in the same State as the place of residence in December 1941.

⁷ See Bureau of the Census, Population, Series P-S, No. 5, Washington, September 2, 1945.

⁸ See Edwin D. Goldfield, The Wartime Labor Force in Major Industrial Areas (in Review of Economic Statistics, Cambridge, Mass., August 1945).



Women over the age of 35 years also entered the labor market in unusual numbers in response to wartime labor demands. Most of the extra workers from this group were married women without responsibility for the care of young children. On the other hand, extra participation of young women between the ages of 20 and 34 was limited by the sharp rise in marriages and births after 1940. The entry of young married men into the armed forces, however, caused many young service wives to obtain jobs or to continue working after they normally would have quit.

Of the extra workers among adult men, some had postponed retirement, some had been able to find steady work, after being employed only intermittently before the war, and others, who had been considered virtually unemployable by the rigid prewar standards, found a market for their services during wartime.

Prospective Labor Supply

The effects of migration on the Pacific Coast labor supply are expected to prove more lasting than the effects of participation of extra workers. Wartime population movements followed well-established prewar patterns; migration was from areas in which expansion of employment opportunities failed to keep up with population growth to the growing industrial areas. The long-term stability in the geographic distribution of employment opportunities was not basically altered by the war.⁹

Moreover, the widely predicted large-scale exodus of workers from war centers following the end of hostilities failed to materialize. While some return migration undoubtedly took place after the war, cities such as San Diego and Los Angeles had considerably larger populations early in 1946 than in April 1944.¹⁰ This is attributable not only to the return of servicemen, but also to the fact that the economy of the Far West was very successful in absorbing workers displaced by reconversion cut-backs in war production. Within a year after the war's end, the number of employees in nonagricultural establishments had reached the VJ-day level. This relatively smooth transition from war to peacetime activities has encouraged workers who migrated during the war to remain in the West.

In view of these postwar developments and the long-term trend westward both in times of prosperity and in times of depression, migration between 1945 and 1950 is likely to be at a rate at least as great as the prewar—1935 to 1940—rate. Only if a period of severe de-

⁹ See Seymour L. Wolfbein and A. J. Jaffe, Internal Migration and Full Employment (in Journal of the American Statistical Association, Washington, D. C., September 1945).

¹⁰ See Bureau of the Census, Population, Series P-SC, No. 183, 1946, and Series CA, Nos. 2 and 5, Washington, April 29 and May 25, 1944.

pression were to set in, would the rate be likely to fall below the prewar level.

Judging from the national experience and prospects, most of the extra workers drawn into the West Coast labor force are likely to drop out by 1950. In the Nation as a whole, only one-fourth of 8 million extra wartime workers were still in the labor force after 1 year of peace. The greatest decline in the extra-worker group occurred among school-age youth and college-age men and women, as the prewar trend toward longer schooling was resumed and large numbers of veterans whose education had been interrupted during the war returned to school with the aid of the "GI Bill of Rights."

Next in importance has been retirement from the national labor force of 1½ million women between the ages of 20 and 34 years. This movement stimulated by the current high marriage and birth rates, is consistent with the previous observation that women in the early years of marriage and childbearing are least responsive to employment opportunities. Currently, the fact that there are about 1 million fewer of this age in the labor market, than might have been expected on the basis of prewar trends, indicates the extent to which such women will retire from employment if there are ample opportunities for male wage earners at relatively high wages.

In contrast, only 1 million of the women aged 35 years and over and virtually none of the men aged 25 and over who entered the labor force during the war retired from it during the first postwar year. It is recognized that one of the effects of the urgent wartime demand for labor was to provide employment opportunities for older men and women who had been forced from the labor market because of a lack of work opportunities during the depression. Whether or not they remain in the labor force in the coming years will depend largely upon the availability of employment opportunities.

All factors considered, the number of additional workers in the 1950 United States labor force is expected to be about 1 million—roughly 15 percent of the wartime total. On the same basis, the wartime extra-worker total on the West Coast in 1950 would be about 100,000.

Table 3 presents estimates of prospective labor supply on the West Coast in 1950, under three assumptions as to the volume of interstate migration between 1945 and 1950. In all three projections, it is assumed that participation of extra workers in each State will be 15 percent of the wartime extra-worker total.

Under the medium assumption (B), the West Coast's labor supply in 1950 would come to about 5,800,000 persons—approximately 1,500,000 above the 1940 level and only slightly below the wartime

peak. This increase of 36 percent between 1940 and 1950 compares with an expected gain of 13 percent for the Nation as a whole. California's labor force would show the fastest expansion over the decade, 39 percent, but Oregon and Washington would also show substantial increases of 28 and 27 percent, respectively.

TABLE 3.—*Estimated labor force in the United States, by major geographic division, 1940 and 1945, and projected 1950*¹

[In thousands]

Division or State ²	1940 ³	1945 ³	1950 ⁴		
			Assump- tion A	Assump- tion B	Assump- tion C
United States.....	54, 778	65, 986	62, 028	62, 028	62, 028
Pacific.....	4, 268	5, 859	5, 375	5, 787	6, 224
California.....	3, 056	4, 207	3, 904	4, 240	4, 566
Oregon.....	470	624	566	603	636
Washington.....	742	1, 028	905	944	1, 022
Mountain.....	1, 580	1, 848	1, 796	1, 827	1, 770
West South Central.....	5, 004	6, 087	5, 715	5, 594	5, 433
East South Central.....	4, 050	4, 705	4, 600	4, 507	4, 282
South Atlantic.....	7, 249	8, 868	8, 810	8, 918	8, 864
West North Central.....	5, 418	6, 281	5, 617	5, 357	5, 185
East North Central.....	11, 203	13, 883	12, 644	12, 655	12, 913
Middle Atlantic.....	12, 249	14, 069	13, 281	13, 202	13, 118
New England.....	3, 757	4, 386	4, 190	4, 181	4, 239

¹ Labor force includes all persons 14 years of age or over working or seeking work, and members of the armed forces. All data are at April seasonal level. Annual average for total United States is about three-fourths of a million higher.

² For a listing of the States included in each division, see table 2, footnote 1.

³ Preliminary, pending release of Census official estimate of United States total, on basis comparable with current census series.

⁴ Corresponding data for each State and detailed description of the estimating procedures appear in Bureau of Labor Statistics Bulletin No. 893, *State and Regional Variations in Prospective Labor Supply* (reprinted from *Monthly Labor Review*, December 1946, with additional data).

All three projections assume that the 1950 labor force of each State will include some "extra" workers who would not be in the labor force on the basis of the prewar patterns of labor-market participation. Participation of extra workers in each State is assumed to be 15 percent of the wartime extra-worker total. All three projections take account of net civilian interstate migration between 1940 and 1945. None of the projections makes allowance for migration from foreign countries between 1940 and 1950. Assumptions with respect to interstate migration between 1945 and 1950 are as follows:

Assumption A.—Whatever new interstate migration takes place between 1945 and 1950 will be offset by return of wartime migrants to their prewar States of residence so that interstate migration in the last half of this decade will have no net effect on the size of the labor force in each State.

Assumption B.—The net number of workers who move between States during the period 1945-50 will be the same as would be expected on the basis of 1935-40 experience.

Assumption C.—Net interstate migration of all workers between 1945 and 1950 will be equal to the net interstate migration of civilian workers between 1940 and 1945. Migration of workers on this scale during the second half of the decade could come about with a considerably smaller total population movement than occurred during the first half, because wartime civilian migrants included large numbers of servicemen's dependents and a relatively small proportion of men of working age.

Composition of the Labor Force

An analysis of labor supply on the West Coast should provide some insight into the composition as well as the size of the working force. The sections which follow outline certain key characteristics of the labor supply as well as trends in labor-market participation among the various components of the population.

CHARACTERISTICS OF MIGRANTS

Because of the importance of migration to the labor force of the Pacific Coast region, the personal characteristics of migrants are significant. Migrants to the Coast provide a highly versatile and productive source of labor. Contrary to the popular impression, most of the people who move to the Pacific States are in the young, vigorous age groups. More than half of the in-migrants between 1935 and 1940, for example, were over 20 but under 45 years of age; only 10 percent were over 55 (see table 4).

TABLE 4.—*Age distribution of in-migrants to the Pacific coast, 1935-40, by sex*¹

Age groups	Number (in thousands)			Percent distribution		
	Total	Male	Female	Total	Male	Female
All migrants, 5 years and over.....	1, 047	548	499	100. 0	100. 0	100. 0
5-10 years.....	259	132	127	24. 8	24. 0	25. 5
20-34 years.....	432	232	200	41. 3	42. 3	40. 1
35-44 years.....	153	82	71	14. 6	15. 0	14. 2
45-54 years.....	101	53	48	9. 6	9. 7	9. 6
55-64 years.....	62	30	32	5. 9	5. 5	6. 4
65 years and over.....	40	19	21	3. 8	3. 5	4. 2

¹ Source: Sixteenth Census, 1940, Population, Internal Migration 1935-40, Age of Migrants, Bureau of the Census, Washington, 1946.

To a large extent, the newcomers have already been educated and trained at the expense of other States. Approximately half of the 1935-40 in-migrants 25 to 34 years of age had a high-school education or better, and 9 out of 10 had a seventh-grade education or better. This educational level was about as high as that for the comparable group of nonmigrants on the Coast in 1940.

In addition, migrants to the West Coast as a group have had training in many fields of work. Their 1940 occupational distribution in general resembled that of nonmigrants even with respect to the most skilled types of labor. For example, approximately 10 percent of the 1935-40 in-migrant workers and 8 percent of the nonmigrant workers were engaged in professional or semiprofessional occupations in 1940; 12 percent of the migrants and 13 percent of the nonmigrants were employed as craftsmen or foremen.

It is not surprising, in view of these facts, that the California State Reconstruction and Reemployment Commission made the statement, "California got a bargain when 1,300,000 new people came here for war jobs * * * migration has been one of California's chief avenues to greatness and growth, the new people who have come to this State are a distinct asset."¹¹

¹¹ California State Reconstruction and Reemployment Commission, *How Many Californians?* Sacramento, Calif., July 1944 (pp. 5, 10).

AGE DISTRIBUTION

In spite of the inflow of young workers through migration, the Far Western labor force as a whole is relatively old, most nearly resembling that of the industrial Northeast¹² (see table 5). In 1940, only 42 percent of the workers on the Pacific Coast were under 35 years of age, compared with 52 percent in the South. To a large extent, the older labor force in the Far West reflects low fertility, which in turn is associated with the fact that the great majority of the population resides in towns and cities. In 1940, approximately 87 percent of the Pacific population resided in nonfarm areas, as compared with only 61 percent of the southern population.

Labor-Market Participation

Certain characteristics within each age and sex group of the labor force in the Far West differ from those in other sections. Specifically, in the Pacific region relatively few teen-age youngsters, older men, and adult women are in the working population (see table 5).

TEEN-AGE YOUTHS

The worker rate (proportion of labor force to population) of young people 14 to 19 years old in the Pacific States, in 1940, was 22.6 percent—a rate considerably lower than the rates of 31.7 and 28.7 percent in the South and the Northeast, respectively. This reflects a longer period of schooling for teen-age youth in the Far West than in other regions. In the Pacific States, 61.4 percent of the school-age population (5 to 24 years) attended school in 1940, compared with 59.8 percent in the Northeast and 53.6 percent in the South.

The substantially higher proportion of young people who attend school in the Far West as compared with the South partly reflects rural-urban differences between the two sections. Southern youngsters leave school at particularly early ages, largely because of the availability of jobs in agriculture for unpaid family labor. It is noteworthy, however, that the school attendance rate on the Pacific Coast also exceeds that of the Northeast, despite the fact that a greater proportion of the Pacific Coast young people live in rural areas.

OLDER MEN

The proportion of workers among older men is considerably lower in the Far West than in other regions, including the Northeast, because many such men from other States settle on the Pacific Coast when they retire. The worker rates for older men in the Pacific region are particularly low in comparison with those in the South,

¹² The Northeast, as defined in this article, includes the New England, Middle Atlantic, and East North Central States.

because the latter is a predominantly agricultural region. In non-agricultural communities, which prevail in the Far West and the Northeast, a worker is often forced to leave the labor market when he can no longer compete with younger men. In agricultural regions, however, men are able to work to later ages, because farming is typically a family enterprise in which age is no bar to continuation in a working status.

TABLE 5.—*Labor Force in selected regions of the United States, classified by age and sex, 1940*¹

Age and sex	West Coast			Northeast ²			South		
	Number (in thousands)	Percent distribution	Worker rate ³ (percent)	Number (in thousands)	Percent distribution	Worker rate ³ (percent)	Number (in thousands)	Percent distribution	Worker rate ³ (percent)
All workers:									
14 years and over.....	4,268	100.0	53.9	27,210	100.0	54.9	16,303	100.0	54.0
14-19 years.....	210	4.9	22.6	1,920	7.1	23.7	1,635	10.0	31.7
20-24 years.....	531	12.4	65.2	4,004	14.7	73.5	2,426	14.9	63.3
25-34 years.....	1,086	25.5	65.8	6,818	25.0	66.8	4,345	26.6	64.2
35-44 years.....	960	22.5	65.1	5,801	21.3	63.2	3,361	20.6	62.9
45-54 years.....	808	18.9	61.9	4,805	17.7	59.8	2,438	15.0	59.9
55-64 years.....	506	11.9	53.3	2,805	10.3	51.8	1,434	8.8	53.0
65 years and over.....	167	3.9	21.1	1,057	3.9	23.2	664	4.1	28.8
Males:									
14 years and over.....	3,221	100.0	79.3	19,979	100.0	81.0	12,323	100.0	82.2
14-19 years.....	141	4.4	30.0	1,137	5.7	33.9	1,196	9.7	46.4
20-24 years.....	360	11.2	87.1	2,409	12.1	90.3	1,689	13.7	90.4
25-34 years.....	815	25.3	96.2	4,842	24.2	96.8	3,195	25.9	96.2
35-44 years.....	734	22.7	96.2	4,460	22.3	97.3	2,543	20.6	96.5
45-54 years.....	628	19.5	91.9	3,886	19.5	94.1	1,929	15.7	93.5
55-64 years.....	405	12.6	81.8	2,345	11.7	85.3	1,196	9.7	86.8
65 years and over.....	138	4.3	35.6	900	4.5	41.6	575	4.7	50.0
Females:									
14 years and over.....	1,047	100.0	27.1	7,231	100.0	29.1	3,980	100.0	26.2
14-19 years.....	69	6.6	15.0	783	10.8	23.6	439	11.0	17.0
20-24 years.....	171	16.3	42.6	1,595	22.1	57.4	737	18.5	37.5
25-34 years.....	271	25.9	33.7	1,976	27.3	37.9	1,150	28.9	33.3
35-44 years.....	226	21.6	31.8	1,341	18.5	29.2	818	20.6	30.2
45-54 years.....	180	17.2	28.9	919	12.7	23.5	509	12.8	25.4
55-64 years.....	101	9.6	22.1	460	6.4	17.2	238	6.0	17.9
65 years and over.....	29	2.8	7.1	157	2.2	6.6	89	2.2	7.7

¹ Preliminary, pending release of Census official estimate of United States total on basis comparable with current Census series.

² Northeast includes the New England, Middle Atlantic, and East North Central States.

³ Proportion of labor force to population. Percentages were computed from unrounded figures.

WOMEN

Although approximately 1 woman in 4 in the Far West worked or sought work outside her home, in 1940, this rate of labor-market participation (27.1 percent) was lower than that in the Northeast (29.1 percent) and slightly higher than that in the South (26.2 percent). Relatively more women are in the Northern labor market because of the high concentration of that region's female population in industrial urban areas. The West Coast has relatively more women in farm areas than the Northeast and also has relatively more in rural nonfarm districts. Worker rates for women in every section of the

country increase with urbanization. Greater household responsibilities, larger families, and lack of outside employment opportunities limit labor-market participation of rural women.

Although most women in the Far West live in urban areas, their rate of labor-market participation was only slightly above that of Southern women, the majority of whom live in rural areas. This is attributable to the very small proportion of the women in the Pacific States who are nonwhite. In the South, however one-fourth of the women are nonwhite, and nonwhite women work or seek work (mostly in domestic service) to a greater extent than do white women.

TRENDS IN LABOR-MARKET PARTICIPATION

Certain trends in the rates of labor-market participation by various groups in the population are discernible over long periods. In general, the same long-term trends prevail in the Far West as elsewhere in the Nation. Operating to reduce prospective labor supply are the movements toward fewer younger and fewer older workers. The worker rate of youths 14 to 19 years old on the Pacific Coast dropped from 33.2 percent in 1920 to 22.6 percent in 1940; that of men 65 and over fell from 53.9 percent in 1920 to 35.6 percent in 1940.

The principal factor working in the opposite direction—toward a larger labor force—is the trend toward greater employment of women. The worker rate for women aged 20 to 44 years in the Far West rose from 26.4 percent in 1920 to 34.9 percent in 1940. This increasing proportion of women workers has accompanied a movement away from farms, a long-term decline in the birth rate, and mechanization of household and industrial processes. Moreover, social attitudes toward employment of women have become more favorable.

These long-term trends in labor-market participation, in combination with natural population growth, would cause the Pacific labor force to increase by only 160,000 between 1940 and 1950. But the chief importance of the trends is in reshaping the composition of the work force. The future labor force on the West Coast will include more women and fewer older and younger persons than in the past. Public interest will more than ever, therefore, be concerned with problems relating to labor standards for women, social security, and educational facilities, as well as with the basic problem of maintaining high levels of employment.

Wartime and Postwar Employment Trends in California

By M. I. GERSHENSON, *Chief, Division of Labor Statistics and Research, California
Department of Industrial Relations*

LONG BEFORE Japan's surrender, questions were raised as to what would happen in California "after the war." What would be the aftermath of a huge increase in population, a tremendous expansion of the labor force, and a severe distortion of the employment pattern? Would the State be able to absorb the thousands of workers who would lose their jobs in war plants and at the same time find employment for the service men and women who would be returning to civilian life? It was obvious that California's problem was not that of reconverting prewar plants to peacetime operations, since new war industries were superimposed on an economy in which manufacturing was a relatively small part of the total, and war plants were literally built on vacant fields.

As a result of the wartime upheaval of the Nation's population, California's population increased from 7 million in April 1940 to 9 million in 1946, and the civilian labor force rose from 3 million to 3½ million. During the war, however, the number of employed civilians increased more rapidly than population or civilian labor force, and unemployment virtually disappeared.

Wartime Employment Changes

Total civilian employment, including owners and self-employed as well as wage and salary workers, rose to 3,712,000 in June 1944. This represented an increase above the prewar level of 48 percent. Between June 1944 and June 1945 civilian employment decreased by 111,000 as a result of reductions in manufacturing. Seasonal factors were responsible for a slight rise to 3,658,000 in the 2 months preceding Japan's surrender.

The course of total civilian employment obscures wide variations in the wartime trends for the several industry divisions comprising the total. In some divisions the working force increased tremendously, in others only moderately; one major group registered a decrease of 30 percent (table 1).

MANUFACTURING

The exigencies of war affected manufacturing to a greater extent than any other industry division. Ships and airplanes—the prime requisites for waging global war—were "must" production items for California. Employment in the State's industrial plants, including

TABLE 1.—*Estimated civilian employment in¹ California, by industry, selected months 1940-46²*
[In thousands]

Industry division	Apr. 1940	June 1943	June 1944	June 1945	Aug. 1945	Feb. 1946	June 1946	Aug. 1946	Nov. 1946	Dec. 1946
All industry divisions.....	2,514	3,671	3,712	3,601	3,658	3,327	3,552	3,698	3,642	3,648
Agriculture, forestry, and fishing ³	272	328	337	370	388	304	373	415	385	355
Agriculture.....	267	324	333	366	384	300	368	409	379	349
Forestry and fishing.....	5	4	4	4	4	4	5	6	6	6
Mining.....	48	34	33	32	32	36	37	38	38	37
Metal mining.....	17	7	6	5	5	5	6	6	6	6
Crude-petroleum and natural-gas production.....	25	22	22	22	22	25	25	26	25	25
Nonmetallic mining and quarrying.....	6	5	5	5	5	6	6	6	7	6
Construction ³	119	163	156	150	154	151	174	183	182	176
Manufacturing.....	414	1,191	1,124	909	909	625	688	764	730	730
Transportation, communication, and utilities.....	184	253	271	278	286	284	288	293	290	293
Railroads.....	54	90	101	104	106	98	98	96	94	94
Street and suburban railways and bus lines.....	10	12	12	10	10	12	11	11	11	11
Trucking and warehousing for hire.....	33	44	44	44	46	45	45	48	47	47
Water and other transportation.....	26	41	48	51	54	48	48	48	46	48
Communication.....	31	41	42	45	46	53	56	59	60	60
Utilities: water, light, and power.....	30	25	24	24	24	28	30	31	32	33
Trade.....	634	681	697	737	744	794	830	849	878	899
Wholesale.....	156	167	160	169	173	178	188	191	192	196
Retail.....	478	514	537	568	571	616	642	658	686	703
Service.....	606	592	620	621	634	678	715	725	719	724
Hotels and other lodging places.....	46	50	52	52	54	53	54	56	53	53
Laundries and other personal serv- ices.....	79	85	88	91	92	96	100	101	100	101
Domestics.....	111	80	84	85	86	88	89	90	90	91
Banking.....	35	34	34	36	36	41	43	44	44	44
Insurance and real estate.....	87	81	82	82	84	96	100	101	102	102
Automobile-repair services and garages.....	22	21	22	22	24	29	31	31	32	32
Business services and repair.....	46	52	57	59	58	63	67	67	67	68
Motion pictures, amusement, and recreation.....	66	74	83	78	80	84	91	92	86	88
Education, medical, legal, charit- able, and other services.....	114	115	118	116	120	128	140	143	145	145
Government ⁴	237	429	474	504	511	455	447	431	420	434
Federal.....	51	242	284	313	322	264	250	233	216	227
State and local.....	186	187	190	191	189	191	197	198	204	207

¹ The estimated employed includes wage and salary workers, employers, own-account workers, and unpaid family workers.

Source: California Department of Industrial Relations, Division of Labor Statistics and Research.

² Does not include Mexican contract workers and emergency volunteer workers.

³ Contract construction. Does not include force-account or Government construction workers.

⁴ All civilian employees of the Federal, State, and local governments regardless of the activity in which the employee is engaged.

owners and self-employed, rose from 414,000 in April 1940 to 1,191,000 in June 1943. This increase was considerably larger, both relatively and absolutely, than for any other industry division. The impetus of war contracts catapulted manufacturing from third to first place among the 8 major industry divisions. Two of every 3 persons recruited to the ranks of the civilian employed between April 1940 and June 1943 augmented the personnel of manufacturing firms. In June 1943 approximately a third of all civilian workers in the State were employees of industrial establishments, contrasted with a sixth in April 1940.

The unprecedented increase in manufacturing was concentrated largely in aircraft and shipbuilding. Employment in these two industries skyrocketed from less than 45,000 before the war to a peak of more than 640,000 in the summer of 1943. These two industries alone absorbed one-half of the entire 1940-43 increase in the total number of civilians employed in California.

Unprecedented gains, although not as spectacular as in aircraft and shipbuilding, were also recorded in other manufacturing industries closely related to the war effort. In the durable-goods category (other than transportation equipment), the largest increases in the number of wage and salary workers occurred in the following groups:

	Number employed		Percent increase
	April 1940	Wartime peak	
Nonferrous metals and their products....	7, 700	26, 200 (Nov. 1943)	240
Electrical machinery and equipment....	8, 200	26, 100 (June 1944)	218
Machinery (except electrical).....	23, 500	73, 100 (Feb. 1944)	211
Iron and steel and their products.....	35, 200	75, 400 (June 1943)	114

So-called "war" industries in the nondurable-goods division reached their wartime peak later than the durable-goods groups:

	Number employed		Percent increase
	April 1940	Wartime peak	
Rubber products.....	6, 700	21, 200 (Mar. 1945)	216
Chemicals and allied products.....	16, 600	28, 600 (Feb. 1945)	72
Petroleum products.....	18, 300	29, 400 (Mar. 1945)	61

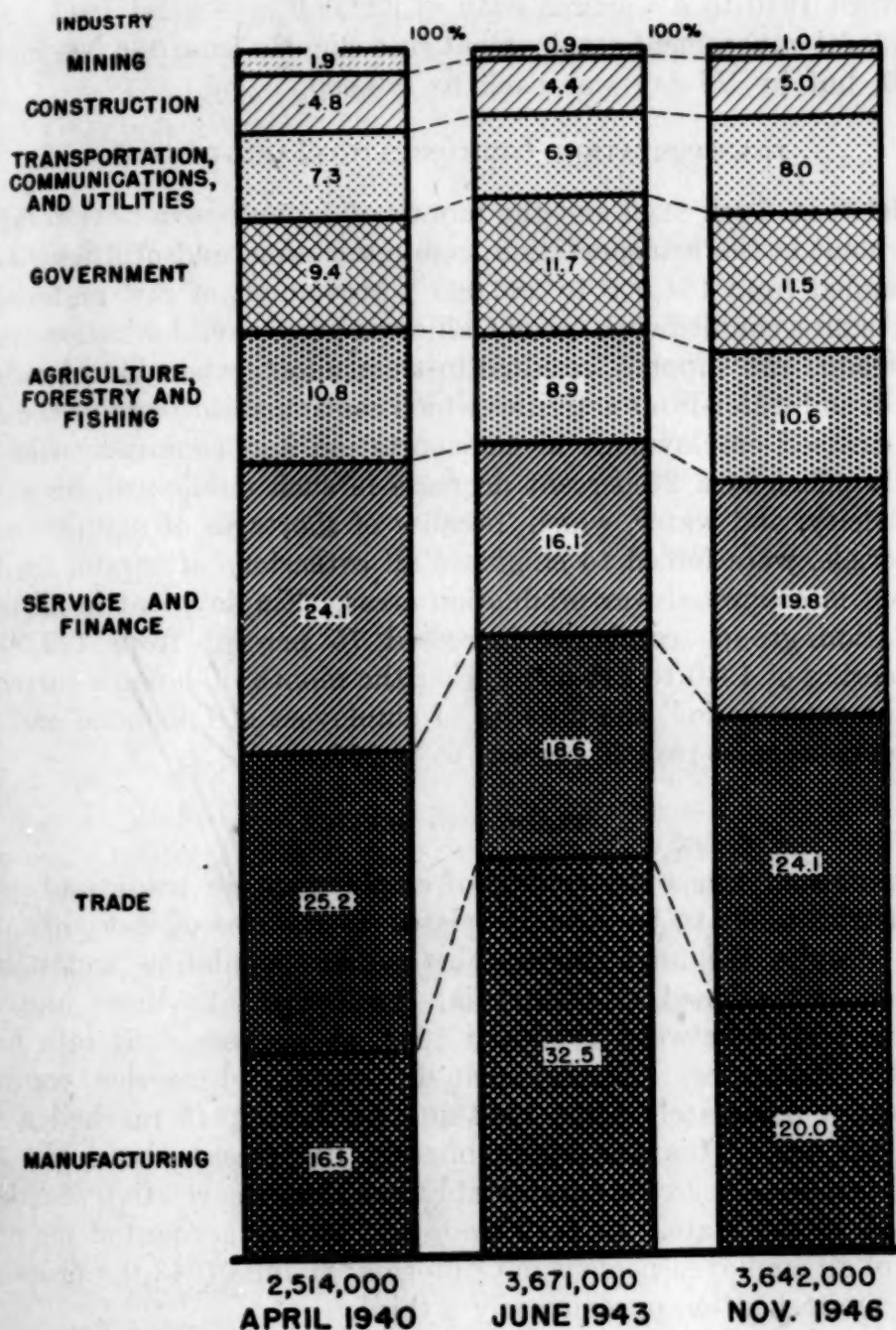
Employment in manufacturing, which had reached its peak in 1943, turned down moderately in 1944, after aircraft, shipbuilding, iron and steel, nonferrous metals, machinery, and electrical machinery had all passed their employment peaks. Abrupt declines occurred in 1945 following the surrender of Germany.

Thousands of workers who staffed the war factories of the State were women, whose employment as production workers rose from 66,000 in 1941 to a wartime peak of 285,000 in August 1943. In 1944 they comprised 29 percent of all factory workers. Over half of the new recruits among women went into the aircraft industry (which employed 104,000 women at the peak) and into shipyards (which employed over 40,000 at the peak, or 15 percent of their total force). By August 1945, however, with the early contraction of aircraft and shipbuilding, the total number of women in factories was down to 187,000.

GOVERNMENT

Next to manufacturing, the largest wartime gain in civilian employment occurred in government service. The total number of persons in California engaged in government service rose from 237,000 in April 1940 to a peak of 511,000 in August 1945—an increase of 116 percent.

DISTRIBUTION OF TOTAL CIVILIAN EMPLOYMENT IN CALIFORNIA



Source:
STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS

INCLUDES AGRICULTURAL WORKERS, EMPLOYERS,
OWN-ACCOUNT, AND UNPAID FAMILY WORKERS.

Before the war, State and local government employees greatly outnumbered Federal personnel in California, but this relationship was reversed soon after Pearl Harbor. Federal employment, notably in navy yards, arsenals, supply depots, airfields, hospitals, ports of embarkation, and other military establishments, increased from 51,000 in April 1940 to a wartime peak of 322,000 in August 1945. State and local government employment rose slightly from 186,000 in April 1940, but by VJ-day was back to 189,000.

TRANSPORTATION, COMMUNICATION, AND UTILITIES

Between April 1940 and the month of Japan's surrender total employment in the transportation, communication, and utilities division expanded from 184,000 to 286,000. Movement of raw materials to war plants, coupled with use of California ports as embarkation centers for troops and supplies, resulted in tremendous expansion of railway, truck, and water-front activities which continued throughout the war.

Increased employment in transportation and communication was partly offset by a 20-percent decrease in such public utilities as gas, electricity, and water, which, because of shortages of manpower and materials, were forced to eliminate all extensions of capital facilities except in congested war production areas. Employment in all transportation groups combined increased 75 percent from 123,000 in the spring of 1940 to 216,000 during the month of Japan's surrender. In the same period, the number of employees of telephone and telegraph companies rose 50 percent to 46,000.

TRADE AND SERVICE

In normal times the volume of employment in trade and service industries tends to be directly related to the size of the population; but, despite the huge increase in civilian population and military personnel stationed in California, employment in these industries changed little between 1940 and 1943, as workers went into higher paying industries. Employment in trade and service combined increased moderately after 1943 and by June 1945 reached a total of 1,358,000. This was approximately 10 percent above the April 1940 level—an increase considerably less than the relative population growth in the State. In 1940 trade and service accounted for nearly half of all employed persons in California; in June 1943 the proportion had diminished to approximately a third.

Employment in wholesale and retail trade in California increased from 634,000 in April 1940 to 681,000 in June 1943. Although thousands of small firms closed their doors because of shortages of

goods and labor and because of diminution of the tourist trade,¹ some large trade establishments were able to increase their sales forces by intensive recruitment of women and by greater use of part-time personnel. In addition, many new trade establishments were opened in war-work centers, which sprang up almost overnight in various parts of the State. Employment in trade increased slightly in 1944 and then at a more accelerated rate in 1945. By VJ-day the number of persons in wholesale and retail distribution of commodities had reached 744,000.

Among the service industries, employment increased between 1940 and 1943 in laundry and cleaning and dyeing establishments, hotels and lodging places, amusement and recreation, and business and repair services owing to the large number of war workers and military personnel in the State. In all other groups, the trend was downward or showed little change. The net change for the service division as a whole was a decrease from 606,000 workers in April 1940 to 592,000 in June 1943. From this point, employment turned upward until June 1944 and maintained this level until August 1945. Following the surrender of Germany the upward trend was once more resumed and on VJ-day employment in the service division totaled 634,000 persons.

CONSTRUCTION

Construction employment in California was relatively small in April 1940, but rose rapidly thereafter and reached peak levels in the fall of 1942. The heavy demand for war-workers' housing and for army and naval installations resulted in an increase in the personnel of private contract construction firms from 119,000 in April 1940 to nearly 200,000 in August 1942. The trend then turned sharply downward, and by June 1945 employment in construction had receded to approximately 150,000. This reflected the drastic limitations imposed on all but the most essential building and maintenance work because of serious manpower and material shortages.

MINING

The most significant wartime change in the mining division was the sharp contraction of employment in the metal-mining group from 17,000 in 1940 to about 7,000 in 1943, as a result of restrictions on the production of gold. Gold mining was reduced to a small fraction of its prewar importance (many mines being allowed to continue only

¹ Records of the California State Board of Equalization indicate that the number of trade outlets decreased from a pre-Pearl Harbor peak of 205,000 in December 1940 to approximately 170,000 in June 1943. These figures do not represent retail establishments exclusively, as all businesses in the State which handle any commodities subject to the retail sales tax are required to secure a sales-tax license whether or not their chief activity is selling articles at retail. The trend, however, reflects primarily retail trade.

on a property-maintenance basis), whereas activity was concentrated in special strategic metals for war use, such as tungsten, mercury, chromium, and vanadium.

Even before the war, employment in crude-petroleum and natural-gas production had followed a gradual downward trend. This continued during the early years of the war and was not reversed until the beginning of 1943, when petroleum products were in urgent demand for military purposes. The number of workers in quarries and nonmetallic mines increased rapidly in 1941 and continued on a high level in 1942. With the falling off of construction activity, employment contracted sharply during 1943.

The net result of the diverse trends in the several groups comprising the mining division was a decrease in total employment in the division as a whole from 48,000 in April 1940 to 32,000 in June 1945—a level which was maintained through VJ-day.

AGRICULTURE, FORESTRY, AND FISHING

Compared with other industry divisions, employment in agriculture changed relatively little during the war years. Despite military withdrawals and loss of workers to war industries, employment in agriculture was reasonably well sustained. In California the trend was slightly upward between 1940 and 1945, and with the aid of foreign contract and emergency volunteer workers the farmers of the State broke all production records during the war. Some loss of employment was experienced in forestry and fishing, but in California these industries represented only 2 percent of total employment in the division as a whole in April 1940.

It is estimated that 370,000 persons, exclusive of Mexican contract and emergency volunteer workers, were employed in agriculture, forestry, and fishing in June 1945, compared with 272,000 in April 1940.

Postwar Employment Changes

As was to be expected, total employment dropped sharply following VJ-day, the decrease being concentrated largely in manufacturing because of heavy lay-offs resulting from widespread contract cancellations. Work stoppages during the fall and winter months gave additional impetus to the downward movement. Contrary to the expectations of a protracted period of decline, the postwar employment low in California was reached within 6 months after the surrender of Japan, reflecting rapid readjustment to peacetime pursuits.

By February 1946 total civilian employment had decreased to 3,327,000 from 3,658,000 in August 1945, a month of high seasonal activity. From the February low point employment climbed steadily

and in September 1946—13 months after the termination of hostilities—reached a peak of 3,766,000. From this high seasonal level civilian employment in California declined to an estimated 3,648,000 in December 1946—more than 320,000 above the postwar low in February.

Unemployment, which recorded a historical low in 1943, had increased somewhat in 1944 and 1945 as war orders slackened; about 120,000 persons were unemployed when hostilities ceased in August 1945. The heavy lay-offs in manufacturing industries immediately following the war's end at once brought a sharp rise in unemployment to an estimated postwar high of 500,000 in the spring of 1946 (according to the California Department of Employment). As manufacturing, trade and service activity, and agriculture and forestry expanded during 1946, this peak was reduced to a seasonal low of 260,000 in the autumn. At the end of 1946, the total unemployed was around 350,000.

As in the case of the figures covering the wartime period, the statistics of total civilian employment since August 1945 obscure diverse postwar trends in the various industry divisions.

MANUFACTURING

On the termination of hostilities with Japan the decrease in manufacturing employment became precipitate as contracts for war supplies were summarily canceled. From 909,000 in August 1945, the total number of persons (including owners and self-employed workers) attached to manufacturing industries dropped uninterruptedly until February 1946, when the postwar low of 625,000 was reached (table 2). This level was approximately half the wartime peak and was better than one and one-half times the April 1940 total of 414,000.

As was to be expected, the postwar decrease in manufacturing was concentrated in the two industries responsible for most of the wartime increase—aircraft and shipbuilding. The number of wage and salary workers in the aircraft industry had declined nearly 50 percent from a peak of 330,000 in 1943 to 171,000 in August 1945, when the war came to an end. Immediate lay-offs brought the number down to 105,000 in the following month, and steady, but more gradual contractions thereafter reduced the working force still further. Employment continued at a low level for several months and then increased slightly to 96,000 in November and December 1946.

Shipbuilding employment (exclusive of Government navy yards) dropped steadily from the wartime peak of 313,000 in 1943 to 146,000 in August 1945. Nearly 50,000 jobs in this industry were wiped out in the month following VJ-day, and continued lay-offs together with

work stoppages in San Francisco Bay Area yards brought the number of wage and salary workers to a low of 34,000 in March 1946. At the close of the year employment was in the neighborhood of 27,000—less than 10 percent of the wartime high.

TABLE 2.—*Estimated employment in manufacturing industries of California, selected months 1940-46*¹

[In thousands]

Industry	Apr. 1940	June 1943	June 1944	June 1945	Aug. 1945	Feb. 1946	June 1946	Aug. 1946	Nov. 1946	Dec. 1946
All manufacturing industries.....	414	1,191	1,124	909	909	625	688	764	730	730
Employers and own-account workers....	21	21	20	20	20	23	23	23	24	24
Wage and salary workers.....	393	1,170	1,104	889	889	602	665	741	706	706
Nondurable goods.....	206	267	285	281	322	277	297	361	316	316
Durable goods.....	187	903	819	608	567	325	368	380	390	390
Food and kindred products.....	81	105	110	104	145	96	104	166	116	114
Fruit, vegetable, and fish canning....	38	36	43	33	74	28	34	88	42	40
Tobacco manufactures.....	1	1	1	1	1	1	1	1	1	1
Textile-mill products.....	6	6	6	5	5	5	6	6	7	7
Apparel.....	28	33	33	33	33	37	39	40	41	41
Paper and allied products.....	6	9	10	10	10	11	12	12	12	12
Printing, publishing, and allied industries.....	33	32	33	35	36	40	42	42	42	44
Chemicals and allied products.....	16	23	27	27	27	25	28	28	29	29
Petroleum products.....	18	22	26	28	29	20	31	32	32	32
Rubber products.....	7	18	20	18	17	15	16	16	17	17
Leather and leather products.....	4	5	4	5	5	6	6	6	6	6
Miscellaneous manufacturing.....	6	13	15	15	14	12	12	12	13	13
Lumber and timber.....	22	29	29	28	27	20	25	26	28	26
Furniture and finished lumber products.....	18	23	22	24	24	23	24	26	29	29
Stone, clay, and glass products.....	17	22	23	22	22	24	26	27	30	30
Iron and steel and their products.....	35	75	67	63	61	37	57	62	64	64
Transportation equipment (except automobiles).....	45	632	549	353	319	135	133	128	123	125
Aircraft and parts.....	38	323	273	185	171	95	91	93	96	96
Shipbuilding and repairing.....	6	307	274	166	146	38	40	33	25	27
Nonferrous metals and their products.....	8	24	24	21	19	15	16	18	18	18
Electrical machinery and equipment.....	8	22	26	24	24	13	18	19	21	21
Machinery (except electrical).....	24	69	71	66	64	48	56	57	60	61
Automobiles and automobile equipment.....	10	7	8	7	7	10	13	17	17	16

¹Includes administrative, supervisory, sales, technical, and office personnel, and force-account construction workers, as well as production and related workers.

Source: California Department of Industrial Relations, Division of Labor Statistics and Research.

Employment in other war manufacturing industries fell off sharply after the cessation of hostilities. Plants manufacturing consumers' goods, however, began to take on workers in large numbers, and soon employment in many industries began to break previous records. An almost uninterrupted increase brought the total number of wage and salary workers in the apparel industry to above 40,000 in the fall of 1946, as against 28,000 in April 1940. Employment in plants producing furniture and finished lumber products rose to over 29,000 in the latter period from a prewar level of 18,000. Wage and salary

workers in paper and allied products exceeded 12,000 in the closing months of 1946—twice the prewar level. In printing, publishing, and allied industries a new high of 44,000 was recorded in December 1946, representing an increase of more than 10,000 above the April 1940 level. Reflecting the postwar building boom, employment in the stone, clay, and glass products group climbed to approximately 30,000 in the closing months of 1946—an increase of 67 percent above April 1940. Within the food-products group new all-time highs were registered in 1946 in dairy products, meat products, beet sugar, and beverages. Although not numerically large, new postwar peaks also were reached in the textile-mill products and leather-products industries.

Particularly significant was the postwar recovery in many of the so-called "war industries." In the chemicals groups, total employment fell off sharply following VJ-day, but a steady uninterrupted increase in 1946 brought the total number of wage and salary workers to a new peak of 29,000 in November 1946. Cessation of hostilities had little effect on the petroleum-products group; the total number employed was 32,000 in the fall of 1946—approximately 3,000 above the wartime peak and 75 percent above April 1940. The rubber-products group, after dropping to a postwar low of around 14,000 employees, recovered to 17,000 in November 1946, which was 4,000 below the wartime high, but more than double the prewar level.

Among the durable-goods industries, the largest relative postwar increase occurred in the automobile and automobile-equipment group. From around 7,000 in August 1945 the total number of wage and salary workers skyrocketed to 19,000 in October 1946, compared with the April 1940 total of less than 10,000.

After declining to nearly 35,000, total employment in the iron and steel group recovered to nearly 65,000 in October 1946—30,000 above the prewar level. Substantial recoveries to levels well above those prevailing before the war were recorded also in nonferrous metals, electrical machinery and equipment, and machinery (except electrical).

GOVERNMENT

The only major industry division other than manufacturing in which employment registered a nonseasonal decrease following VJ-day was government, reflecting reductions in the number of Federal employees largely in arsenals, navy yards, and other wartime establishments. More than 100,000 Federal employees lost their jobs in the 15 months following the surrender of Japan, as employment was reduced to 216,000 in November 1946. Despite this sharp contrac-

tion, the number of Federal employees in California in 1946 was more than 4 times the number in April 1940.

Offsetting the decrease in Federal employment was a moderate but steady rise in the number of persons employed in State and local government jurisdictions, which increased to 207,000 in December 1946—a level some 20,000 above April 1940. At the close of 1946 Federal employees continued to outnumber those in State and local government service, whereas before the war there were 3 State and local government employees for every Federal employee in California.

TRADE AND SERVICE

The most effective offset to the deep postwar cuts in manufacturing employment was the rapid and sustained increase in trade and service employment as war-closed civilian businesses were reopened and thousands of new businesses were established to meet the needs of California's enlarged population. The number of owners, self-employed, and wage and salary workers in trade and service increased from 1,378,000 in August 1945 to 1,597,000 in mid-November 1946, just before the usual pre-Christmas rise in retail stores. This increase of 220,000 was greater than the net reduction of 179,000 in manufacturing employment during the same period.

Reflecting unprecedented increases in the number of trade establishments, the number of persons in wholesale and retail trade rose to 878,000 in November 1946 from 744,000 in August 1945.² This rise of 134,000 includes an estimated increase of some 31,000 owners and self-employed persons. The hiring of extra workers for the Christmas rush brought the total number of persons attached to trade to 899,000 in December 1946, the highest in the history of the State.

As in the case of trade, the end of the war gave impetus to the upward trend in service industries which was evident prior to VJ-day. Between August 1945 and December 1946, 90,000 persons found job opportunities in service and finance industries as employment increased to 724,000. Of this increase, 35,000 were employers and own-account workers.

With but one exception, employment in every subgroup within the service division was higher at the end of 1946 than in August 1945 (table 1). Largest relative increases occurred in automobile-repair services and garages, banking, insurance and real estate, business and repair services, and education, medical, legal, charitable, and other service groups.

² By VJ-day the number of trade outlets licensed by the State Board of Equalization had recovered from a wartime low of 170,000 in 1943 to 200,000. Between VJ-day and July 1, 1946, 32,000 new trade outlets were opened and an additional 10,000 received retail-sales permits in the following quarter, so that by October 1946 the number had reached the record-breaking total of 242,000.

TRANSPORTATION, COMMUNICATION, AND UTILITIES

Postwar employment reductions in transportation were offset by increases in communication and water, light, and power utilities. Total employment of 293,000 in the division as a whole at the end of 1946 was slightly above the total in August 1945 and more than 100,000 above the April 1940 level.

Railroad employment practically doubled between April 1940 and August 1945, but declined slightly after the war. Employment in local transportation and trucking maintained their war-end levels. Water and other transportation fell off moderately.

Large-scale hiring by the telephone industry, reflecting postwar expansion of capital facilities, resulted in an increase in the total number of telephone and telegraph workers in California from 46,000 in August 1945 to 60,000 in December 1946. Similarly, employment in water, light, and power utilities expanded by one-third to 33,000 at the close of 1946.

CONSTRUCTION

Shortages of men and materials retarded postwar progress in the construction industry. Total employment dropped from 154,000 in August 1945 to a postwar low in January 1946, but increased to 185,000 in September 1946. Employment in the construction industry fell off at the end of the year to approximately 176,000 in December 1946. Construction experienced a similar seasonal decline throughout the Nation.

MINING

Employment in the mining division as a whole increased after VJ-day from 32,000 in August 1945 to a postwar high of 38,000 in August 1946. This level, nevertheless, was some 10,000 below the total for this division in April 1940. Metal mining continued to be depressed, reflecting an unfavorable relationship between the price of gold and operating costs which made the resumption of gold mining on the prewar scale unattractive. Employment in crude-petroleum and natural-gas production rose from 22,000 in August 1945 to 26,000 in July 1946 and then dropped to the April 1940 level of 25,000 in the closing months of the year. The number of workers in nonmetallic mining and quarrying rose from 5,000 in August 1945 to 7,000 in November 1946 and then declined seasonally to 6,000 in December.

NONAGRICULTURAL EMPLOYMENT IN CALIFORNIA^{*} COMPARED WITH UNITED STATES

The net increase in nonagricultural employment between April 1940 and November 1946 was considerably greater in California than in the Nation as a whole. The relative differences between the two

are shown in the following tabulation of percentage changes for the various industry divisions and for total nonagricultural employment, from April 1940 to November 1946.

	United States Percent change	California
Total nonagricultural employment.....	37.2	55.9
Manufacturing.....	47.0	79.6
Mining.....	-1.8	-19.0
Construction.....	53.6	75.9
Transportation, communication, and utilities.....	39.5	61.1
Trade.....	28.2	44.3
Service.....	31.0	33.3
Government.....	29.1	77.2

AGRICULTURE, FORESTRY, AND FISHING

Employment in agriculture experienced the usual seasonal fluctuations during 1945 and 1946, but on a relatively high level. Farmers in many areas in the State took advantage of unusually favorable weather conditions in November and December 1946 and a more abundant labor supply to advance winter farm operations well ahead of usual schedules. As a result, employment during the closing months of 1946 was sustained above normal seasonal levels.

In December 1946, 355,000 persons were engaged in agriculture, forestry, and fishing, compared with the seasonal high of 477,000 in September. Not included in these totals are 15,000 Mexican nationals who were working on California farms at the end of the year and 20,000 during peak operations in September 1946.

RETURN OF EMPLOYMENT PATTERN TO NORMAL

The shift of the California economy from peace to war resulted in severe distortion of the employment pattern. With the return to peace, traditional relationships began to be restored and the employment pattern at the end of 1946 was not very different from that in 1940.

Employment in the Northwest¹

IN THE PACIFIC NORTHWEST,² which had only a moderate degree of industrialization before the war, the wartime employment growth was concentrated chiefly in shipbuilding and aircraft. Since these war-expanded industries were staffed to a large extent through in-migration, it was anticipated that the postwar employment problems of the region might well be acute. This has not proved to be true as yet, since activity in the area remains high and unemployment is not marked.

Trends in Northwest Compared with United States

During the war period, nonagricultural employment³ exclusive of government, in the Pacific Northwest, showed much greater relative

TABLE 1.—Trend of nonagricultural employment¹ in Pacific Northwest² and United States, by major industry division, September 1939,³ and annual averages 1943-46

Period	Total nonagricultural (excluding government)	Manufacturing ⁴	Mining	Transportation and public utilities	Trade	Finance	Service and miscellaneous	Contract construction ⁵
Employment (in thousands)—Northwest								
1939 (September) ----	587.6	191.8	6.1	89.8	163.6	26.2	80.5	29.6
1943.....	960.1	477.7	5.2	106.1	187.2	26.3	94.7	62.9
1944.....	983.5	467.7	4.4	112.4	197.4	27.7	104.5	69.4
1945.....	879.9	390.1	3.8	112.3	199.5	28.4	106.9	38.9
1946.....	817.7	278.6	4.0	117.4	215.6	33.4	120.0	48.7
Index (September 1939=100)—Northwest								
1943.....	163.3	249.0	84.8	118.1	114.4	100.6	117.6	212.2
1944.....	167.3	243.8	72.1	125.1	120.6	105.8	129.7	234.3
1945.....	149.7	203.4	62.0	125.0	121.9	108.5	132.7	131.3
1946.....	139.1	145.2	65.8	130.6	131.8	127.5	149.0	164.5
Index (September 1939=100)—United States								
1943.....	135.6	172.5	103.9	120.9	107.9	99.9	115.1	140.2
1944.....	133.8	169.9	100.0	126.9	108.8	98.9	116.0	101.2
1945.....	129.2	151.4	93.5	129.5	114.4	102.5	119.7	105.7
1946.....	126.7	144.2	94.6	134.3	127.2	117.1	136.9	132.3

¹ Includes all nonagricultural divisions except government.

² The States of Oregon and Washington comprise the Northwest.

³ Estimates for manufacturing and construction are based on 1939 annual averages, all others are based on September 1939.

⁴ Prepared in the Employment Statistics Division of the Bureau's Employment and Occupational Outlook Branch, by Eleanor H. Barnes under the direction of Clara F. Schloss.

⁵ The States of Washington and Oregon comprise the Northwest as used in this article.

⁶ "Nonagricultural employment" as used in this article includes wage and salary workers in all non-agricultural establishments except government. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded. This applies to both regional and United States employment.

gains than did like employment throughout the United States. At its wartime peak, employment in the region had risen above prewar by over 70 percent, as compared with a 36-percent rise in the total number of nonagricultural workers in the United States. Although postwar employment declines were proportionately greater in Washington and Oregon than in the United States as a whole, employment in the Northwest in 1946 on the basis of annual averages was 39 percent greater than in 1939, while the corresponding figure for the United States was 27 percent (see table 1).

Trend of Nonagricultural Employment in Northwest

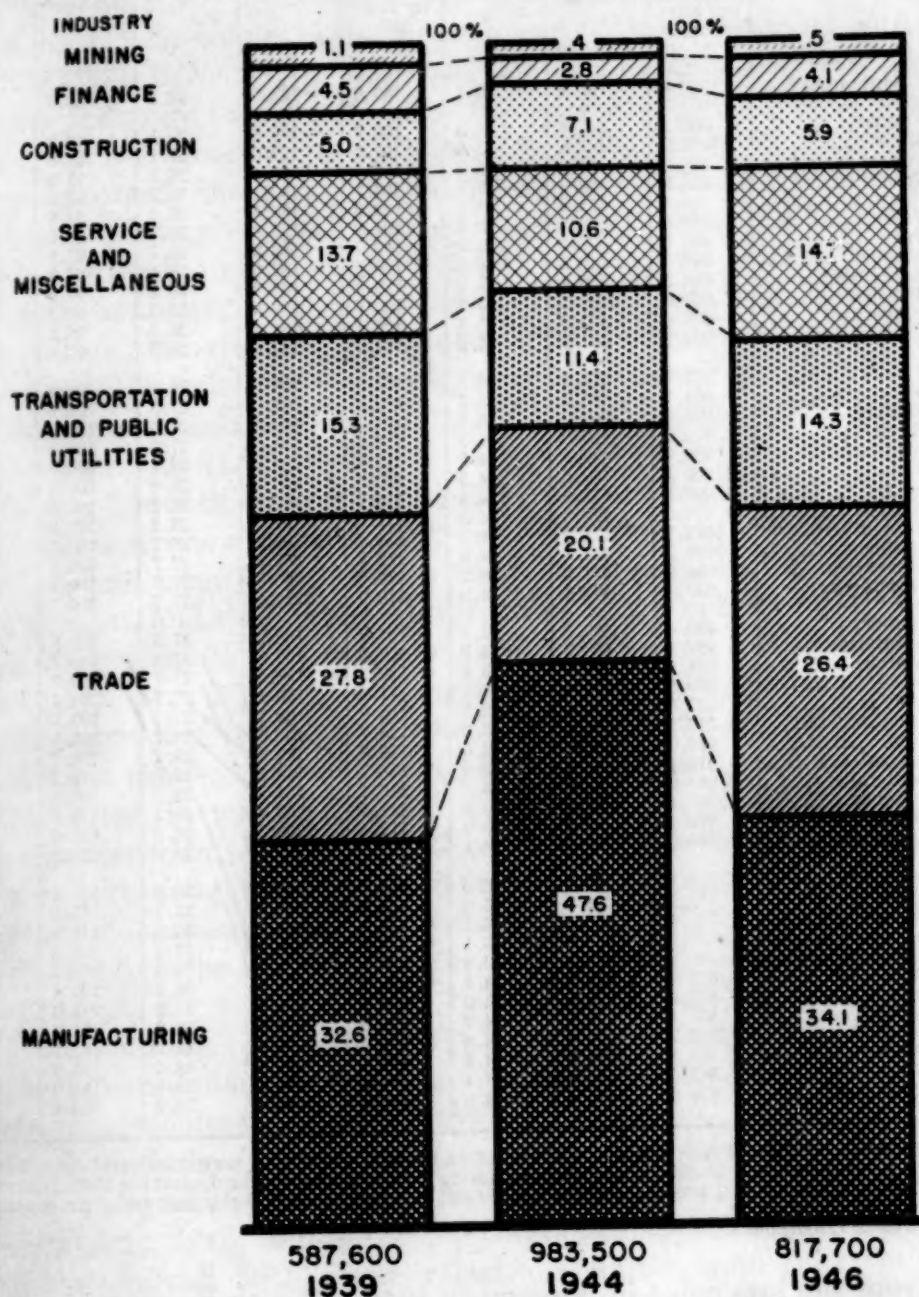
In September 1939, almost a third of the 588,000 nonagricultural workers in the Pacific Northwest were employed in manufacturing, and more than a fourth were in trade (see chart and table 2). By 1943 the wartime expansion was well under way and about one out of every two workers in the Northwest was employed in manufacturing. In January of that year, nonagricultural industries employed more than one and a half times as many people as in 1939. The largest increase was in factory employment, which went up by 130 percent, although all divisions except mining and finance shared in the gain.

The peak nonagricultural employment—over 1,000,000—was reached in July 1944, when almost 415,000 more people were at work than in 1939. Although manufacturing employment was somewhat below its maximum at this time, the combination of near maximum numbers in transportation and public utilities, construction, and trade, raised nonagricultural employment to its record level.

Even before the end of the war, there were sharp cuts in shipbuilding and in aircraft, so that employment was rapidly reduced. Nonagricultural employment as a whole reached a postwar low of 770,400 in November 1945, which represented a decrease of about a fourth from the peak level but an increase of almost a third above the prewar level. About four-fifths of the reduction was in manufacturing industries, in which seasonal contraction of food industries and a prolonged strike in the lumber industry, in addition to heavy cut-backs in the shipbuilding and aircraft programs, contributed to the decrease. At the same time, trade, finance, and service industries were all taking on employees in the period between July 1944 and November 1945, thus limiting the net decline to some extent.

Even at this low point, all major industry divisions except mining showed appreciable gains over the prewar period, ranging from 13 percent in finance to 40 percent in manufacturing.

DISTRIBUTION OF NONAGRICULTURAL EMPLOYMENT IN THE NORTHWEST



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

EXCLUDES WORKERS IN FEDERAL, STATE, AND
LOCAL GOVERNMENT. EXCLUDES PROPRIETORS,
SELF-EMPLOYED PERSONS, DOMESTIC SERVANTS,
AND PERSONNEL OF THE ARMED FORCES.

TABLE 2.—*Estimates of nonagricultural employment¹ in Pacific Northwest² by major industry division, September 1939 and by month January 1943–December 1946*

[In thousands]

Year and month	Total nonagricultural (excluding government)	Manufacturing	Mining	Transportation and public utilities	Trade	Finance	Service and miscellaneous	Contract construction
1939: September ¹	587.6	191.8	6.1	89.8	163.6	26.2	80.5	29.6
1943:								
January.....	900.3	441.4	5.3	100.8	185.8	26.1	89.9	51.0
February.....	908.0	447.9	5.2	101.1	177.0	26.1	89.5	61.2
March.....	929.9	457.2	5.2	102.8	179.5	26.1	91.9	67.2
April.....	938.9	462.2	5.3	103.7	183.4	26.3	93.5	64.5
May.....	951.4	471.0	5.3	104.0	185.4	26.4	93.9	65.4
June.....	980.5	488.7	5.3	107.8	187.8	26.8	96.5	67.6
July.....	990.5	498.0	5.2	109.7	188.6	26.7	97.6	64.7
August.....	988.6	498.0	5.2	110.5	187.0	26.4	96.8	64.7
September.....	990.5	500.4	5.2	110.3	188.4	26.2	97.0	63.0
October.....	984.3	496.3	5.2	108.2	190.9	26.2	96.5	61.0
November.....	979.6	489.0	5.1	107.1	194.4	26.2	96.1	61.7
December.....	978.3	481.8	5.0	107.4	197.8	26.2	97.4	62.7
1944:								
January.....	971.4	471.8	4.7	107.9	193.8	26.8	99.4	67.0
February.....	963.1	465.7	4.7	109.3	187.9	27.3	101.1	67.1
March.....	966.2	462.2	4.6	109.7	188.4	27.5	102.5	71.3
April.....	970.9	459.0	4.5	110.3	191.6	27.7	104.5	73.3
May.....	980.9	459.1	4.5	112.4	194.3	27.7	105.7	77.2
June.....	1,000.1	467.5	4.5	115.6	196.9	28.0	107.3	80.3
July.....	1,002.3	472.2	4.4	116.7	197.6	28.2	107.5	75.7
August.....	1,000.6	472.3	4.3	117.0	197.5	28.2	105.9	75.4
September.....	997.3	474.7	4.3	114.4	200.3	28.0	106.0	69.6
October.....	991.7	474.1	4.3	112.8	202.1	27.7	105.4	65.3
November.....	984.0	471.2	4.2	112.0	205.6	27.5	103.9	59.6
December.....	972.9	462.8	4.0	110.9	212.8	27.7	104.1	51.6
1945:								
January.....	949.4	460.7	3.9	108.8	198.3	27.5	103.8	46.4
February.....	928.4	453.2	4.0	109.2	193.8	27.5	102.2	38.5
March.....	914.2	441.9	3.8	110.2	193.2	27.7	102.2	35.2
April.....	909.5	432.4	3.7	111.2	196.1	27.7	103.5	34.9
May.....	907.6	426.8	3.7	113.0	196.1	27.7	103.9	36.4
June.....	912.4	425.7	3.7	114.7	195.1	28.2	106.2	38.8
July.....	916.6	426.9	3.6	115.3	193.2	28.7	109.2	39.7
August.....	913.1	416.5	3.6	115.7	195.8	28.8	110.2	42.5
September.....	861.6	362.6	3.8	112.1	204.5	28.7	109.4	40.5
October.....	789.1	291.1	3.9	111.4	202.4	29.1	110.4	40.8
November.....	770.4	268.7	3.9	112.4	208.3	29.5	110.0	37.6
December.....	786.0	274.4	4.1	113.5	217.1	29.7	111.8	35.4
1946:								
January.....	779.1	276.9	4.0	114.1	205.7	30.8	111.7	35.9
February.....	772.9	270.0	3.9	113.4	204.5	31.3	112.5	37.3
March.....	778.4	268.5	4.1	114.3	204.9	31.8	114.6	40.2
April.....	790.9	265.0	3.1	115.2	210.8	33.2	117.9	45.7
May.....	796.2	263.1	3.4	116.1	212.6	33.4	119.2	48.4
June.....	819.2	277.7	4.2	118.7	211.9	33.9	120.8	52.0
July.....	835.2	283.4	4.0	120.7	214.6	34.9	123.2	54.4
August.....	850.4	290.6	4.2	121.6	217.7	35.0	124.3	57.0
September.....	855.7	296.4	4.4	119.2	219.5	34.2	125.2	56.8
October.....	851.6	291.3	4.3	118.8	223.4	34.0	123.8	56.0
November.....	843.0	280.6	4.4	117.2	230.1	34.0	123.0	53.5
December.....	839.9	279.4	4.6	118.9	232.0	33.9	123.4	47.7

¹ Estimates include all full- and part-time wage and salary workers in nonagricultural establishments (except government) who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded.

² See table 1, footnote 2.

³ See table 1, footnote 3.

From the low point in November 1945, activity increased again, so that by December 1946, about 70,000 nonagricultural workers had been taken on, which brought the total to about 840,000. Much of this expansion was in such industries as trade, which accounted for a third of the gain, and in services, which took on about a fifth of the new workers. These industries had been understaffed during the war.

Trends in Major Industry Divisions

MANUFACTURING

The Northwest had three things that the Nation needed to meet the needs of war—protected rivers and harbors suitable for building ships on a year-round basis, the nucleus of a shipbuilding industry with past experience in ship construction, and a well-established lumber industry to provide construction materials for ways and for ships. With these resources available, manufacturing employment increased much more rapidly in the Northwest between September 1939 and September 1943 than in the Nation as a whole. In September 1943, the peak manufacturing employment for the region—500,400—represented an increase of 160 percent from 1939, while the Nation's maximum employment in November of the same year represented a gain of 77 percent over the prewar period (table 3). With some variation, this relatively high position was maintained throughout the war period.

In the 3-month interval immediately following VJ-day, however, the situation was quite different; by November 1945, almost 150,000 workers had been dropped from the factory pay-rolls in Washington and Oregon, and employment levels were only 40 percent above 1939. The December 1946 employment—279,400—was about 46 percent above the prewar level, as compared with an increase in factory employment for the Nation as a whole of over 55 percent. The region and the Nation each gained about 45 percent in manufacturing employment between 1939 and 1946, however, if seasonal factors are disregarded. As of the end of 1946, the trend of employment in the Nation appears to be definitely upward, but in the Pacific Northwest seasonal factors have so strongly influenced the employment trend in the last few months that it is very difficult to appraise the outlook.

Transportation equipment.—The growth and decline of the transportation-equipment industry dominated industrial employment and even nonagricultural employment as a whole in the Northwest for the war and the immediate postwar periods.⁴ Only 7,000 workers were employed in the shipbuilding and aircraft industries in 1939, but by July 1943, almost 249,000 were employed. This high level was maintained, with slight variations, throughout 1943; in 1944, employment began to decline, and by August 1945, only 176,600 were employed. In the 3-month interval after the war ended, two

⁴ Estimates for the transportation equipment group do not include Government-operated navy yards.

men were laid off for every man retained. Not until December 1946 were increases in aircraft workers of sufficient magnitude to cause a slight upturn in the group employment. However, the necessity of absorbing displaced shipbuilding-aircraft workers forms the key peacetime problem. To solve this the Northwest must look to its large peacetime manufacturing industries and to other components of the economic life of the region.⁵

TABLE 3.—*Manufacturing employment*¹ *in Pacific Northwest,*² *1939 annual average; key months, 1943-44; by month, August 1945-December 1946*

[In thousands]

Industry group	1939	1943	1944	1945			1946		
		Sept.	July	Aug.	Nov.	Dec.	Jan.	Feb.	Mar.
All manufacturing.....	191.8	500.4	472.2	416.5	268.7	274.4	276.9	270.0	268.5
<i>Durable goods</i>	123.6	404.2	383.0	320.2	168.9	182.8	188.6	183.6	184.3
Iron and steel.....	5.7	11.4	11.5	9.7	8.8	9.1	8.9	8.9	9.7
Machinery, except electrical.....	3.9	14.4	13.3	11.4	9.4	9.5	9.4	8.9	8.7
Transportation equipment, except autos.....	7.1	242.5	223.5	176.6	68.6	62.4	58.3	52.4	49.0
Nonferrous metals.....	2.1	9.7	10.5	9.0	5.1	4.9	4.9	4.8	4.0
Lumber and timber.....	90.8	109.6	106.6	97.2	60.3	79.3	88.2	89.6	92.9
Furniture.....	9.3	9.6	10.6	10.1	10.4	11.1	11.9	12.1	12.5
Other durable goods.....	4.7	7.0	7.0	6.2	6.3	6.5	7.0	6.9	7.5
<i>Nondurable goods</i>	68.2	96.2	89.2	96.3	99.8	91.6	88.3	86.4	84.2
Textile-mill products.....	2.4	3.4	3.5	3.3	3.8	4.0	4.0	4.1	4.3
Apparel.....	4.3	4.8	4.8	4.3	5.5	5.7	5.8	5.5	5.9
Food.....	32.9	57.9	49.3	52.5	53.9	46.6	41.6	39.7	37.2
Paper and allied products.....	13.6	15.3	15.3	15.3	15.1	15.1	15.5	15.9	15.5
Printing and publishing.....	9.8	8.5	8.8	9.2	10.1	8.9	10.2	10.1	10.3
Chemicals.....	2.8	3.4	4.9	8.7	8.1	7.9	7.7	7.6	7.4
Other nondurable goods.....	2.2	2.9	2.6	3.0	3.3	3.4	3.5	3.5	3.6
1946									
		April	May	June	July	Aug.	Sept.	Oct.	Nov.
All manufacturing.....	265.0	263.1	277.7	283.4	290.6	296.4	291.3	280.6	279.4
<i>Durable goods</i>	180.8	176.1	181.0	181.8	185.8	182.7	183.1	182.7	185.2
Iron and steel.....	10.2	10.8	11.4	11.5	11.9	12.6	12.4	12.1	12.3
Machinery, except electrical.....	8.3	8.2	8.1	8.4	8.5	8.6	8.6	8.8	8.9
Transportation equipment, except autos.....	40.9	33.9	30.8	29.7	25.1	23.6	23.1	22.9	25.9
Nonferrous metals.....	4.0	4.1	4.3	5.4	6.7	7.5	7.8	8.3	8.2
Lumber and timber.....	96.9	98.5	105.8	105.9	111.7	109.1	109.4	108.7	108.0
Furniture.....	12.8	12.8	12.9	12.7	13.1	13.1	13.2	13.2	13.2
Other durable goods.....	7.8	7.8	7.7	8.2	8.8	8.2	8.6	8.7	8.7
<i>Nondurable goods</i>	84.2	87.0	96.7	101.6	104.7	113.7	108.3	97.9	94.2
Textile-mill products.....	4.4	4.4	4.4	4.4	4.2	4.4	4.4	4.5	4.6
Apparel.....	6.1	6.0	5.8	6.0	6.3	6.1	6.5	7.0	7.5
Food.....	36.3	39.2	48.7	53.6	56.2	65.1	58.9	48.2	43.9
Paper and allied products.....	16.0	16.3	16.6	16.6	16.6	16.3	16.6	16.7	16.4
Printing and publishing.....	10.5	10.5	10.2	10.1	10.3	10.7	10.8	10.7	11.0
Chemicals.....	7.3	7.0	7.0	6.9	6.9	6.8	6.8	6.7	6.8
Other nondurable goods.....	3.6	3.6	4.0	4.0	4.2	4.3	4.3	4.1	4.0

¹ Estimates include all full- and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded.

² See table 1, footnote 2.

³ See article on Prospective Labor Supply on the West Coast, p. 563; also Pacific Northwest Economic Outlook, 1947, p. 636.

Lumber and timber basic products.—Workers in lumber and logging activities constitute the largest peacetime manufacturing-employment group in the Northwest—over a third of manufacturing employment. About 108,000 workers were on the pay rolls in December 1946, representing an increase of 19 percent from 1939, but a decrease from the highest employment of the war period. With the exception of the last quarter of 1945, when the industry was involved in labor-management disputes, the group has been one of the more stable sources of work in the region.

Not only is this industry an important source of employment in this region, but in December 1946, workers in Washington and Oregon constituted over 15 percent of the national employment in lumber. However, because of its seasonal characteristics, even relatively large postwar expansion in this industry would do little to solve the aircraft and shipbuilding displacement problem.

Food products.—Food-processing workers formed the only other large manufacturing group in the peacetime industrial economy of the Northwest, accounting for about 17 percent of factory employment. The principal food industries are fruit, vegetable, and fish canning, and flour milling. Employment in canning is particularly subject to extreme seasonal peaks which occur in September and October. Variations in employment in 1946 ranged from 36,300 workers in April to 65,100 in September. Average employment in 1946 was 47,400, a 44-percent increase over the 1939 average of 32,900.

Other industries.—Six other small but relatively stable industries in the Northwest furnished employment to an additional 66,000 factory workers in 1946. The largest of these was the pulp and paper products group, employing about 16,300, an increase of 2,600 workers over 1939. Furniture factories employed about 13,000 persons, an increase of 3,500 from the prewar period. A number of other industries—such as chemical products, machinery (except electrical), printing, and iron and steel—employed on the average from 7,000 to 11,000 people. Nonferrous-metals products employed an average of about 6,000 workers in 1946, but the opening of several new aluminum plants in the region resulted in about 3,800 additional jobs in the industry in the last half of 1946.

These smaller manufacturing industries, which are all employing more people than in 1939, accounted for about a fourth of factory employment in the Northwest in 1946. They are not sufficiently large, however, to absorb any appreciable part of the workers formerly engaged in the transportation-equipment industries or of those who will be seasonally unemployed. Employment possibilities in other lines offer more opportunities.

OTHER INDUSTRY DIVISIONS

Trade.—The Northwest has always been a mercantile shipping and trading center not only for the interior of these States, but for Alaska and the Far East. Wholesale and retail trade in the Northwest accounted for a little more than a fourth of the region's employment before the war and was second only to manufacturing. From September 1939 to December 1946, there was a continuous growth in trade amounting to an increase of over 40 percent. By the latter date, it provided employment for 232,000 people. All types of trade took on more workers, but the marked increases were in restaurants and in department and drygoods stores.

Eating and drinking establishments hired 27,000 additional workers between September 1939 and September 1945, bringing the total to over 45,000. Even with a slight decrease from the latter period to December 1946, employment was double the prewar total. General merchandise stores added about 12,000 workers between September 1939 and September 1946, to bring the total to 39,000. Retail food and liquor stores and independent wholesale stores also hired more people. Seasonal increases continued the upward trend in most groups between September and December 1946.

Trade in the Pacific Northwest had a somewhat stronger relative position during the war than did trade in the rest of the Nation. Average employment was 20 percent greater in 1944 than in 1939, as compared with an increase of 9 percent in the Nation as a whole. By 1946, however, the regional increase was only slightly greater than the increase in the Nation. The general trend in the region, nevertheless, was still strongly upward.

Service and miscellaneous industries.—Service establishments, a source of relatively steady and increasing employment, accounted for about 15 percent of all workers in the Pacific Northwest in 1946. Employment increased about 55 percent between September 1939 and September 1946, and this level was maintained until the end of the year.

In the postwar period, the service industries in the Northwest have made the second largest gain among the industry divisions. They have also shown a considerably greater relative expansion than has the similar group in the entire United States. They employ half again as many workers as in 1939, as compared with an increase of slightly more than a third in the rest of the Nation. The relative importance of service employment in the economy of the Northwest, its steady wartime expansion, and its continuing postwar increases are encouraging.

Transportation and public utilities.—Transportation and public utilities, accounting for approximately 14 percent of nonagricultural workers, employed 118,900 people in December 1946. In 1939, these industries were the third largest employer in the region, but after the war, with the more rapid growth of service, they dropped to fourth place. The division as a whole gained in employment steadily through the war years, and in 1946 the number of workers was about 30 percent greater than in 1939, slightly less of an increase than in the entire United States. The mining and the transportation and public utilities divisions were the only two in which the relative increase in employment was greater in the Nation than in the Northwest region.

Street railways, trucking, water transportation, and stevedoring constituted about two-fifths of total division employment in December 1946. The work is quite seasonal in nature, with peak periods occurring in July and August. In 1944 the variation between the high and low months was about 8,000 workers. In these industries, also, the general trend has been upward.

Interstate railways employed another third of the workers in transportation and public utilities, or about 37,900 in December 1946. To meet the demands of war, railway employment increased around 10,000 between 1939 and 1943. Only small increases occurred in the following years, and during 1946 a slight down trend was evident.

For most of the war years, communications had a work force of about 13,000 and public utilities had around 8,000. With the end of the war, however, the availability of men and materials, coupled with the delayed demand for service, resulted in a sharp increase in employment in communications. The total rose 42 percent from August 1946 to December 1946.

Construction.—The construction industry is one of the smaller components of nonagricultural employment in the Northwest. It accounted for about 6 percent of all employment before the war. However, construction workers experienced the second largest war-time expansion, ranking next to manufacturing in relative increase over prewar employment. The increase of 130 percent in average annual employment from 1939 to the peak in 1944 was much greater than the increase in the United States as a whole, due to a greater volume of war-plant and war-housing construction. In 1945, employment in this division was reduced but was still 31 percent above the 1939 level. By 1946, as materials for private building became available, construction employment increased considerably throughout the country. Relative expansion in the Northwest was 64 percent, as compared with 32 percent in the whole United States. In

this area, as in the United States as a whole, construction should prove a source of increased labor demand for some time in view of the large backlog of demand for housing and other types of private construction which were postponed during the war.

Finance.—In 1939, about 26,200 workers or about 4 percent of total workers in the region, were employed in finance, insurance, and real estate. Slight increases occurred in 1944 and again in 1945, but it was not until 1946 that many additional workers found employment in these industries. In December 1946, the persons thus employed totaled about 33,400.

Mining.—Mining is the smallest of the major industry divisions and accounts for less than 1 percent of the region's workers. It is the only major group that employed fewer people in the war and post-war years than in 1939. Difficulty in securing labor, suspension of gold-mining activities, and the closing of several chrome mines were some of the factors involved in this decrease. By 1945, annual average employment was 40 percent below the prewar level. By the end of 1946, however, 4,600 workers, or 75 percent of the prewar total, were employed in mining.

Income on the West Coast¹

THE PROPORTION of relatively high-wage employments on the West Coast is greater than in the remainder of the country. This employment pattern is reflected in the extent of urbanization in the area² which in itself is a factor helping to account for the region's high level of money income. Another important factor affecting the income level of the region is the existence of a wage differential which tends to favor West Coast workers. In almost all industries, and for similar occupations in similar industries, West Coast wage rates are higher than in any other region in the country.³

Expanding industry and employment in the Pacific States during the past several decades has led to a competition for workers, in spite of the large numbers who have migrated to the area over the years. The variety and abundance of economic resources and the initiative of the population have enabled the region to absorb the in-migrants at relatively high rates of remuneration. A greater proportion of the population is in the most productive age range than is in the group of younger dependents. The large proportion of older persons with independent incomes and the expenditures of the large numbers of tourists help to support the important trade and service industries.

The growth in the aggregate amount of income payments in these States⁴ has been a natural accompaniment to the increase in population and economic activity. The region experienced the greatest rate of income growth of any large area in the country, both in the prewar and in the war years, exceeding even the substantial increases in the Southern States.⁵ The West Coast share of the country's total income payments increased steadily from 1929 to 1944, and the general level of this proportion appears to have been maintained since the end of the war.

The decrease in income from war manufacturing, at the end of World War II, was largely offset by increases in mustering-out pay-

¹ Prepared by Solomon Shapiro of the Bureau's Labor Economics Staff. The State income data used in this article have been published or made available by the National Income Division of the Office of Business Economics of the U. S. Department of Commerce. The cooperation of this Division is gratefully acknowledged.

² While urbanization in the States of Washington and Oregon was somewhat below the level for the United States in 1940, California, with about 70 percent of the Pacific Coast population, had 71 percent of its population living in cities in that year.

³ See Regional Wage Differentials, by Harry Ober and Carrie Glasser, *Monthly Labor Review*, October 1946.

⁴ State income payments represent income received in the various States by individuals, from payers either within or outside the State. These payments include certain "nonproductive" receipts which are included in money income, such as social-security benefits and relief payments. They exclude certain items of income, like business savings, which accrue to, but are not received by, the population. Certain imputed items, such as products consumed on the farm, are also included.

⁵ See *Income in the South*, *Monthly Labor Review*, October 1946.

ments, unemployment benefits, and payments in trade, service, and other civilian industries. As a result, aggregate income payments in the fourth quarter of 1945, the most recent period for which data are available, were only 5 percent below the peak of war production. Further expansion in the civilian segments of the economy since 1945 has enabled the region to keep the approximate income relationship to the rest of the country which it achieved at the height of war production.

Because of its strategic location with respect to the Pacific theater of war, and the availability of resources for shipbuilding and other war manufactures, the West Coast was the scene of tremendous war activity. This was particularly so in the Seattle-Tacoma area in Washington, the Portland-Vancouver area in Oregon and Washington, and the San Francisco and Los Angeles areas in California.⁶ The presence of various embarkation points on the Coast resulted in a concentration of military personnel, while the increase in war manufacturing caused the migration of hundreds of thousands of workers to the region. The consequent increase in the flow of income caused even the nonmilitary segments of the economy, such as trade and service, to increase at a faster rate than in the rest of the country.

The spectacular expansion of the shipbuilding and aircraft industries on the West Coast helped to bring war manufacturing pay rolls from 5 percent of the area's total income payments in 1940 to about 20 percent in 1944. In 1945, when war manufacturing sharply declined, trade and service pay rolls increased almost 9 percent, which offset about a fifth of the decrease in war manufacturing. Federal Government pay rolls contributed about 9 percent of the total increase in income between 1940 and 1944; these continued to increase in 1945 and offset about 3 percent of the decrease in war manufacturing in that year.

The increase of 1,239 million dollars in military payments was about 12 percent of the total increase in income payments between 1940 and 1944; by the end of the period this type of payment constituted over 7 percent of total income. The inclusion of mustering-out pay raised this percentage to over 8 in 1945. Agricultural income also contributed about 12 percent of the increase in total income payments in the region between 1940 and 1944. A slight decline was experienced in 1945, even though this type of income continued to increase in the other States. A somewhat greater relative increase in farm production expenses in the Pacific States largely accounts for the decline.

⁶ U. S. Bureau of Labor Statistics Bulletin No. 826, *Impact of the War on Employment in 181 Centers of War Activity, 1945*.

Per Capita Income

Since 1941, the West Coast has replaced the Middle East States⁷ as the region of highest per capita incomes (aggregate income payments divided by total population resident in the area). The more rapid increase in incomes on the West Coast, from the depths of the depression in the thirties to the high point of war activity, caused an increasing disparity between per capita incomes on the West Coast and the rest of the country.

For the past few decades, both the population and per capita income in the region have increased more rapidly than in other areas of the country. The capacity of the area to absorb the migrant workers and older retired persons and to increase per capita income at the same time has been rather striking. Among the three States of the West Coast, California has consistently shown the highest per capita income, Washington being second. Since the war, these two States have been at or above the level of New York and Connecticut, the traditional leaders in average incomes.

Payments to civilian population.—During the war years, per capita incomes were, to some extent, influenced by the inclusion of military personnel and pay, particularly in the areas of large military concentrations. While generally per capita income relates to the entire

TABLE 1.—*Per capita income payments¹ to civilian population, West Coast and all other States, 1940-45²*

Year	United States	West Coast				All other States
		Total	California	Oregon	Washington	
	Civilian per capita income payments					
1940.....	\$573	\$746	\$803	\$578	\$626	\$560
1941.....	694	932	981	753	842	675
1942.....	860	1,190	1,214	1,062	1,173	832
1943.....	1,050	1,465	1,497	1,265	1,456	1,012
1944.....	1,143	1,543	1,570	1,331	1,563	1,105
1945.....	1,158	1,485	1,526	1,272	1,447	1,126
	Percent of national civilian per capita income					
1940.....	100.0	130.2	140.1	100.9	109.2	97.7
1941.....	100.0	134.3	141.4	108.5	121.3	97.3
1942.....	100.0	138.4	141.2	123.5	136.4	96.7
1943.....	100.0	139.5	142.6	120.5	138.7	96.4
1944.....	100.0	135.0	137.4	116.4	136.7	96.7
1945.....	100.0	128.2	131.8	109.8	125.0	97.2

¹ Per capita income payments are derived by division of total income payments to civilians (total income payments less net pay of the armed forces) by total civilian population.

² Source: U. S. Department of Commerce, Survey of Current Business, August 1946, and unpublished data.

⁷ Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania, and West Virginia.

population, including military personnel, per capita income payments to civilians are a somewhat better measure of the income status of the average individual during the war. However, so far as trends or interregional relationships are concerned, little difference results from the two methods of computation of per capita income.

Table 1 shows the per capita income payments to the civilian population on the West Coast and in the other States for the period 1940-45. The average civilian income of \$746 in the region in 1940 was \$186 more than in the rest of the country. By 1943, this disparity had increased to \$453, but the subsequent relative decline in the rate of increase reduced the difference to \$359 in 1945. Compared with the average civilian income for the country as a whole, the West Coast average was about 30 percent greater in 1940 and about 40 percent greater in 1943; but in 1945, the average was only 28 percent greater.

Payments to total population (including military personnel).—Table 2 shows per capita income payments for the entire population from 1929 to 1945, on the West Coast and in the rest of the country. The inclusion of the armed forces in the computation of per capita incomes decreases average incomes on the West Coast somewhat, particularly in the last 3 years of the war. This is in interesting contrast to the situation in the low income areas, such as the South, where military

TABLE 2.—Per capita income payments¹ and percent of national per capita income, West Coast and all other States, 1929-45²

Year	United States	West Coast				All other States
		Total	California	Oregon	Washington	
Per capita income payments						
1929.....	\$680	\$865	\$946	\$640	\$713	\$667
1933.....	368	465	511	337	369	361
1939.....	539	691	741	544	588	527
1940.....	575	749	805	579	632	561
1941.....	693	925	974	752	833	674
1942.....	862	1,177	1,189	1,075	1,152	835
1943.....	1,040	1,402	1,426	1,244	1,398	1,005
1944.....	1,133	1,494	1,513	1,318	1,519	1,097
1945.....	1,150	1,446	1,480	1,266	1,407	1,120
Percent of national per capita income						
1929.....	100.0	127.2	139.1	94.1	104.9	98.1
1933.....	100.0	126.4	138.9	91.6	100.3	98.1
1939.....	100.0	128.2	137.5	100.9	109.1	97.8
1940.....	100.0	130.3	140.0	100.7	109.9	97.6
1941.....	100.0	133.5	140.5	108.5	120.2	97.3
1942.....	100.0	136.5	139.0	124.7	133.6	96.9
1943.....	100.0	134.8	137.1	119.6	134.4	96.6
1944.....	100.0	131.9	133.5	116.3	134.1	96.8
1945.....	100.0	125.7	128.7	110.1	122.3	97.4

¹ Per capita income payments are derived by division of total income payments by total population (excluding armed forces and civilians outside Continental United States).

² Source: U. S. Department of Commerce, Survey of Current Business, August 1946, and unpublished data.

pay was higher than average civilian income and the inclusion of the former increased per capita incomes. In 1940, the number of military personnel was not great enough to make a difference in the two measures. In 1943, however, when military personnel within continental United States reached its peak, the per capita income for the entire population was \$63 below that for civilians alone, as compared with \$7 in the rest of the country. In the 13 Southern States per capita income for the entire population was \$12 more than that for civilians alone.

Per capita income for the whole population reduces somewhat the disparity between average incomes on the West Coast and in the rest of the country. In 1943, for instance, West Coast per capita incomes (including armed forces) were 134.8 percent of the national average compared with 139.5 percent for civilian per capita incomes.

Total Income and Types of Payments, 1929-45

The remarkable changes in the volume of income payments after 1929 were accompanied by changes in the proportions represented by aggregate wages and salaries, property income, proprietors' income, and other income payments. While the aggregate amounts of the various types of income increased during the war period, the relative importance of the income shares was considerably altered, in some cases the trend being reversed. These changing shares reflect, to a large degree, the changing structure of the economy.⁸ Table 3 shows the composition of income payments on the West Coast and in the rest of the country and the relation of the components to the total since 1929.

Aggregate income payments.—The expansion in business activity and in the income of individuals, first in the recovery period of the thirties and then during the immediate prewar and war periods, was at a faster rate in the Pacific States than in the rest of the country. Total income payments of 7,339 million dollars on the West Coast were 6 percent greater in 1940 than in 1929; in the remainder of the country, the 1940 payments were still 10 percent below the 1929 figure. During the next 2 years aggregate income payments increased at a considerably more rapid rate on the West Coast than in the remainder of the country. However, after 1942 the rate of increase was not much

⁸ The inclusion of net pay of the armed forces tends to distort the relationship of wages and salaries to total income during the war years. The deduction from military pay for family allowances and allotments and their inclusion in other income is another difficulty in seeing true relationships. The proportions, based on the aggregates of the various types of payments, do not measure the income status of the individuals who receive such income. No account is taken of the numbers of persons in the various groups, a greater change in which may, for the average individual, offset the change in the aggregate. Furthermore, many individuals receive more than one type of income although usually only one type is significant. Data of this sort are not available and without a detailed knowledge of the distribution of income recipients an analysis of the income of individuals is not satisfactory.

greater than in the other States, and in 1945 the West Coast experienced little change while the increase continued in the rest of the country. During the war period the State of Washington experienced the greatest relative expansion of total income payments in the country, an increase of 185 percent between 1940 and 1945. As a result of the more rapid growth of economic activity in the West Coast area, its share of the country's aggregate income payments rose from 8.4 percent in 1929 to 9.7 percent in 1940 and to 11.6 percent in 1945.

TABLE 3.—*Total income payments and their composition, West Coast and all other States, 1929-45*¹

Year	West Coast States					All other States				
	Total income payments ²	Wages and salaries ³	Proprietors' income ⁴	Property income ⁵	Other income ⁶	Total income payments ²	Wages and salaries ³	Proprietors' income ⁴	Property income ⁵	Other income ⁶
Amount (in millions)										
1929.....	\$6, 924	\$4, 297	\$1, 115	\$1, 408	\$104	\$75, 693	\$48, 139	\$12, 701	\$13, 878	\$975
1933.....	4, 048	2, 483	614	749	202	42, 225	26, 083	6, 018	7, 979	2, 145
1939.....	6, 646	4, 101	1, 016	1, 057	472	63, 955	39, 749	9, 957	9, 966	4, 283
1940.....	7, 339	4, 538	1, 167	1, 128	506	68, 513	43, 457	10, 681	10, 207	4, 168
1941.....	9, 369	5, 881	1, 594	1, 422	472	82, 900	54, 062	14, 190	10, 861	3, 787
1942.....	12, 558	8, 647	2, 066	1, 395	450	102, 743	69, 301	18, 306	11, 395	3, 741
1943.....	16, 454	11, 781	2, 597	1, 492	584	122, 831	84, 616	20, 823	12, 175	5, 217
1944.....	17, 910	12, 614	2, 820	1, 607	869	131, 750	89, 057	21, 230	13, 055	8, 408
1945.....	17, 644	11, 925	2, 810	1, 729	1, 180	135, 060	86, 767	22, 584	14, 035	11, 674
Percentage distribution										
1929.....	100.0	62.1	16.1	20.3	1.5	100.0	63.6	16.8	18.3	1.3
1933.....	100.0	61.3	15.2	18.5	5.0	100.0	61.8	14.2	18.9	5.1
1939.....	100.0	61.7	15.3	15.9	7.1	100.0	62.1	15.6	15.6	6.7
1940.....	100.0	61.8	15.9	15.4	6.9	100.0	63.4	15.6	14.9	6.1
1941.....	100.0	62.8	17.0	15.2	5.6	100.0	65.2	17.1	13.1	4.6
1942.....	100.0	68.9	16.4	11.1	3.6	100.0	67.5	17.8	11.1	3.6
1943.....	100.0	71.6	15.8	9.1	3.5	100.0	68.9	17.0	9.9	4.2
1944.....	100.0	70.4	15.7	9.0	4.9	100.0	67.6	16.1	9.9	6.4
1945.....	100.0	67.6	15.9	9.8	6.7	100.0	64.2	16.7	10.4	8.7

¹ Source: U. S. Department of Commerce, Survey of Current Business, August 1945 and August 1946.

² Includes only payments to residents of the continental United States; excludes pay of Federal civilian employees and armed forces stationed outside the country with the exception of that part flowing into this country in the form of voluntary allotments of pay and contributions to family allowance payments by military personnel to their dependents.

³ After deduction of employees' contributions to social security, railroad retirement, railroad unemployment insurance, and Government retirement programs. Pay of the armed forces, net of contributions to family allowance payments and of allotments to individuals, is allocated by States in terms of the State of duty.

⁴ Represents the net income of unincorporated establishments, including farms, before owners' withdrawals.

⁵ Includes dividends, interest, net rents, and royalties.

⁶ Includes public assistance and other direct relief; labor items such as work relief, veterans' pensions and benefits, Government retirement payments, workmen's compensation, and social-insurance benefits; mustering-out payments to discharged servicemen; and family allowance payments and allotments of pay to dependents of military personnel (allocated to State of dependent's residence).

Wages and salaries.—Total wages and salaries paid in the region increased from 2,483 million dollars in 1933 to 4,538 million dollars in 1940, and to 12,614 million dollars in 1944, the year of greatest

war activity. The increase between the extreme dates was 408 percent, but in the remainder of the country it was only 241 percent. Wages and salaries in the West Coast States, which constituted about 62 percent of total income payments before the war, increased to 71.6 percent in 1943. The proportion was slightly below that of the rest of the country before the war; since 1942 this position has been reversed.

Proprietors' income.—West Coast farmers and unincorporated businesses, taken as a group, also enhanced their position relative to the same group in the rest of the country. Between 1933 and 1945, proprietors' income on the Pacific Coast rose 358 percent compared with a 275-percent increase elsewhere. Before the war, this type of income was about as important a component of total income in the Pacific States as in the rest of the country. In 1940 and 1941, it became relatively more important on the West Coast, but declined thereafter to the prewar relationship. The ratio of proprietors' to total income remained somewhat higher in the rest of the country. The greater relative increase in farm income—a more important component outside the West Coast—may account for the latter fact.

Property income.—Receivers of property income, as a group, have had the smallest share in the expansion of aggregate income in the country since the depression years. While other types of income increased threefold to fivefold throughout the country, property income was only about 80 percent higher in 1945 than in 1933. In the Pacific States, however, the increase (131 percent) was significantly larger than in the country as a whole. Declining interest rates and decreased dividends in the thirties together with rent ceilings and increased taxes during the war combined to cause a continuous decline in the relative share of this type of income. Since 1941, the decline in the proportion of this type of income on the West Coast was greater than in the rest of the country.

Other income.—"Other income" increased in relation to the total during the depression years, with the growth of relief and work-relief payments and, after 1935, social-security benefits. These payments declined in relative importance in the early war years as a result of the tremendous increase in the other income components. In 1944 and 1945, the large amounts of allowances and allotments to families of servicemen together with mustering-out pay were significant enough to raise the proportion of "other" income. This is true of both the West Coast and the rest of the country; but after 1942, the increases were somewhat less on the West Coast than in the other States.

Wages and Salaries and Their Composition, 1940-45

The relatively greater increase in economic activity in all segments of the West Coast economy during the war years is indicated in the increasing proportions of the country's total wages and salaries paid to the major industry groups of wage and salary earners on the West Coast, except manufacturing, in which some decline occurred during the last war years (table 4). Table 5 and the chart show the relative importance of the major industrial components of wages and salaries on the West Coast and in all other States during the war period.

Aggregate wages and salaries.—Since the increase in wages and salaries was greater on the West Coast than in the rest of the country, this type of payment rose from 9.5 percent of the country's total in 1940 to 12.1 percent in 1945. The rate of growth during the war years was also greater for each of the industry components of total wages and salaries and, with a few exceptions, greater than in any other region.

TABLE 4.—Percent that West Coast wages and salaries form of national total, by components, 1940-45¹

Year	Percent of national total wage and salary payments					
	West Coast total	Manufacturing	Trade and service	Farm	Federal Government (civil executive)	All other
1940.....	9.5	6.6	11.4	17.1	9.4	10.1
1941.....	9.8	7.5	11.7	18.3	10.6	10.3
1942.....	11.1	9.9	12.3	20.1	12.2	11.1
1943.....	12.2	11.3	13.1	22.4	12.8	12.1
1944.....	12.4	11.1	13.5	23.6	14.3	12.4
1945.....	12.1	9.6	13.4	24.3	15.3	12.6

¹ Source: Based on data from Department of Commerce.

TABLE 5.—Percentage distribution of civilian wages and salaries and their components, West Coast and all other States, 1940 and 1943-45¹

Component	West Coast States				All other States			
	1940	1943	1944	1945	1940	1943	1944	1945
Civilian wages and salaries: ²								
Manufacturing ³	22.7	42.3	40.0	32.6	33.3	45.1	44.7	40.9
Trade and service ³	33.9	21.9	22.9	26.3	27.1	19.6	20.4	22.7
Agriculture.....	3.8	4.0	4.2	4.8	1.9	1.9	1.9	2.0
Federal Government ⁴	3.8	8.4	9.2	10.0	3.8	7.7	7.6	7.4
All other.....	35.8	23.4	23.7	26.3	33.9	25.7	25.4	27.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

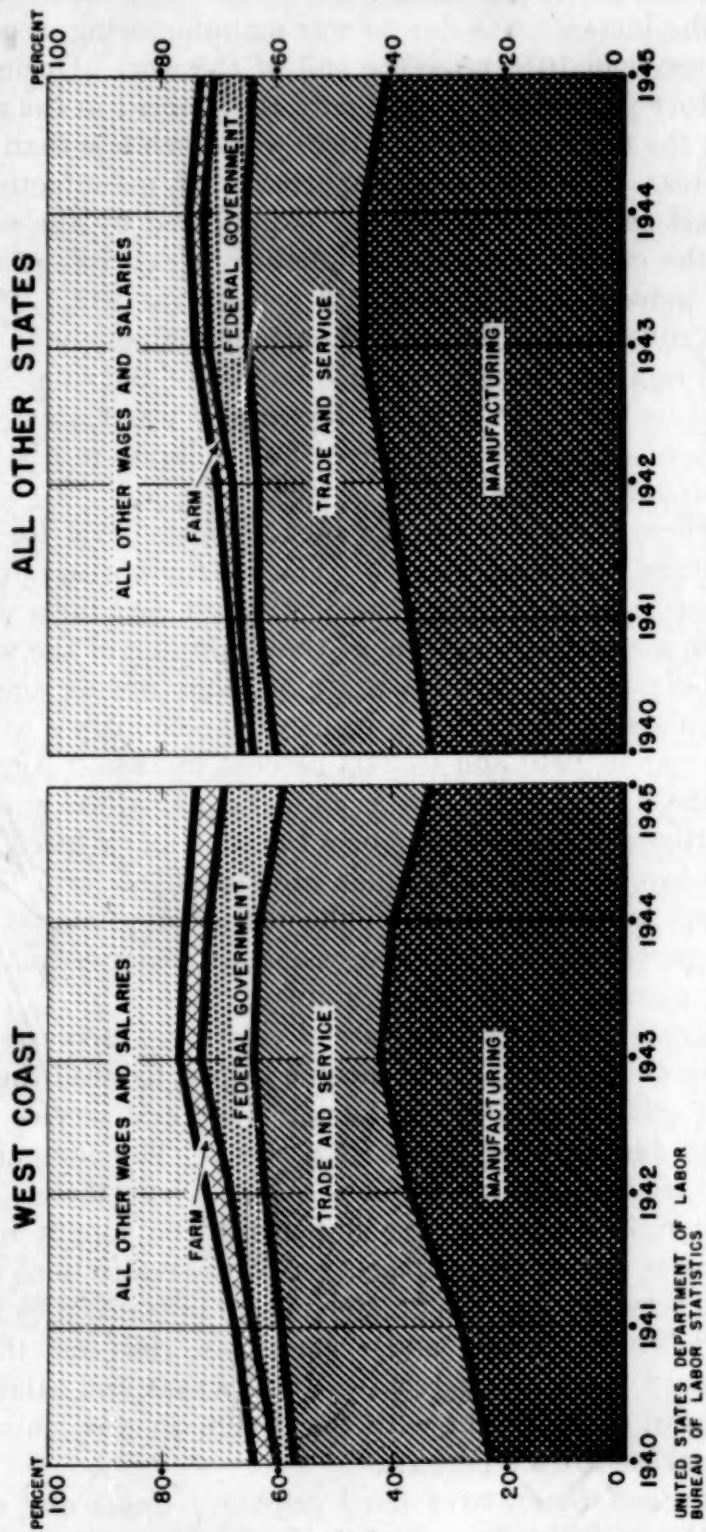
¹ Source: Based on data from Department of Commerce.

² After deduction of employees' contributions under social-insurance programs.

³ Before deduction of social-insurance contributions.

⁴ Before deduction of civil-service retirement contributions of employees.

PERCENTAGE DISTRIBUTION OF CIVILIAN WAGES AND SALARIES
IN SELECTED INDUSTRIES
WEST COAST AND ALL OTHER STATES



Manufacturing wages and salaries.—These rose 365 percent in the Pacific States from 1940 to 1945. Because a substantial part of the increase was due to war manufacturing, a considerable decline occurred in 1945 after the end of the war. During the same period factory pay rolls increased only 164 percent in the rest of the country, but the relative decline in 1945 was much less than in the West Coast States. The increased importance of manufacturing on the West Coast as a result of the war is indicated by the region's proportions of the country's total manufacturing pay roll—5.8 percent in 1929, 6.6 percent in 1940, and 11.3 percent in 1943. The region's factory pay rolls became the most important component of total civilian wages and salaries, rising from 22.7 percent of the total in 1940 to 42.3 percent in 1943. In spite of the drop in war manufactures, the proportion of manufacturing wages and salaries in 1945 was still greater than that of trade and service.

Farm wages.—With the highest wage level for farm labor in the country, the West Coast attracted farm workers during the war when other areas were losing them. West Coast farm wage rates, starting from a relative high level at the beginning of the war, increased more rapidly than in any other region, thus raising aggregate farm wages in this area from 14.6 percent of the country's total in 1933 to 17.1 percent in 1940 and to 24.3 percent in 1945. Aggregate farm wages in the 3 West Coast States almost equalled the amount paid in the 13 Southern States where 5 or 6 times as many hired farm workers were employed. With a smaller proportion of farm labor in the Pacific Coast labor force than in the rest of the country, farm wages were 4.8 percent of total civilian wages and salaries in 1945 compared with 2.0 percent in the other States.

Trade and service wages and salaries.—Increases in wages and salaries and other types of income helped to swell the amounts of wages and salaries paid in the Pacific trade and service industries between 1940 and 1945 by about 94 percent. The comparable figure for the rest of the country is 62 percent. Nevertheless, trade and service pay rolls became a less important component of total wages and salaries during the war because of the restrictions on consumer goods and services, and the greater importance given to manufacturing and agriculture. Trade and service pay rolls on the West Coast decreased from 33.9 percent of total wages and salaries in 1940 to 21.9 percent in 1943; but with the decline in war manufacturing in 1945, they rose to 26.3 percent.

Federal Government (civil executive) wages and salaries.—Pay rolls in the executive branch of the Federal Government in the West Coast region increased from 9.4 percent of the national total in 1940 to 15.3

percent in 1945. These payments increased more than fivefold in the Pacific States between 1940 and 1945, compared with an increase of 279 percent for the rest of the country. The greater expansion in Federal pay rolls on the West Coast resulted from the greater relative increase in war activity in the region.



Homesteads for Veterans in Yakima Valley¹

SEVENTEEN HUNDRED acres of irrigated farm lands in the Yakima Valley of the State of Washington were opened as homesteads for men and women veterans of World War II on April 1, 1947. The land is part of more than 4,100 acres of public lands of the Roza Division of Yakima Project which are to become available for homesteads as rapidly as the U. S. Bureau of Reclamation can complete irrigation facilities that are under construction.

In announcing the availability of the initial 28 homesteads in this region, the Secretary of the Interior stated that the land is rich and suitable for a variety of crops, when irrigated. Sixteen of the 28 farms allotted to veterans in April were fully or partly developed on a lease basis during wartime. The remaining 12 units are lowlands covered with sagebrush. Each unit is from 40 to 100 acres.

To qualify, a veteran must have had at least 90 days' service during World War II. His eligibility was determined by a board of examiners and, in general, was dependent upon 2 years of farm experience, \$3,000 in liquid capital or assets or credit usable in the development of an irrigated farm, good character and industry, and the physical ability to do the required farm work. Applicants also were required to meet the principal qualifications of the Federal homestead laws including age (21 years or head of a family, with exceptions for veterans), citizenship (citizens or having declared their intention to become citizens), and limitation of land ownership (not more than 160 acres in the United States). The cost to the homesteader was only the Government fee and irrigation construction charges.

¹ Information is from press release No. 14229 of the U. S. Department of the Interior, Information Service, dated February 14, 1947.

Postwar Wage Developments in the Pacific Region¹

VJ-DAY IN 1945 marked the beginning of negotiations leading toward widespread wage adjustments on the Pacific Coast. The relatively high degree of union organization in the Pacific region² provided machinery for negotiations on a broad area basis, and many significant and far reaching wage changes were made. This article summarizes available information on the movement of manufacturing and non-manufacturing wages in the region during recent years, and discusses significant wage negotiations in a number of the region's leading industries that influenced the course of postwar wage movements.³

The Pacific States have long enjoyed a favorable position in the Nation's wage structure. As a region these States have the highest general wage level in the country, and their major cities rank among the top-wage areas in the United States.

West Coast wages in 37 manufacturing and 7 nonmanufacturing industries are compared with industry-average wages in table 1. Although the choice of industries for which data are presented was limited by the availability of recent information, those selected demonstrate conclusively the high general wage level of the Pacific region.⁴

Recent Wage-Rate Trends in Manufacturing

This wage leadership, established over a long period of time, has been maintained during the recent war and postwar years. The Bureau of Labor Statistics index of urban wage rates,⁵ available since

¹ Prepared by Leonard R. Linsenmayer, Wage Analyst, of the Bureau's San Francisco Regional Office.

² The Pacific region as referred to in this article comprises the States of Washington, Oregon, California, and Nevada.

³ The article is not concerned with the technical aspects or evaluation of Government wage-price policies and machinery following VJ-day. For a discussion of this subject, see Wage Policy and the Role of Fact-Finding Boards, Monthly Labor Review, April 1946 (p. 537).

⁴ See also Regional Wage Differentials (Labor in the South), Monthly Labor Review, October 1946, and Intercity Variations in Wage Levels, Bureau of Labor Statistics Bulletin No. 793 (reprinted from Monthly Labor Review, August 1944).

⁵ For the latest report on urban wage trends for the United States as a whole, see Monthly Labor Review, March 1947 (p. 369).

The urban wage rate series measures trends in basic wage rates resulting from general wage changes and from individual wage-rate adjustments within individual occupational classifications. For incentive workers, they reflect changes in straight-time hourly earnings of key occupational groups. They exclude the effects of such factors as the shifting of employment among regions, industries, and occupations, and most of the changes in the composition of the labor force, as well as changes in payments for overtime and late-shift work, vacations and holidays, and other similar items.

Data for the national studies have been collected periodically from approximately 6,500 identical establishments in 60 urban areas. Of these, some 700 establishments are located in seven urban areas of the Pacific region. The information concerning industry wage trends for the region and for specific cities was derived from a special analysis of data collected in these national surveys.

April 1943 for the Pacific region, shows that manufacturing wages in that region advanced 8.2 percent during the last 2 years of heavy

TABLE 1.—*Straight-time average hourly earnings in selected industries, United States and Pacific region*

Industry	Date of survey	Straight-time average hourly earnings				
		United States	Pacific region ¹			
			Total	Los Angeles	San Francisco	Portland
Manufacturing						
Apparel:						
Men's and boys' dress shirts, etc.	Apr. 1945	\$0.68	\$0.86	\$0.90	\$0.81	
Overalls and industrial garments	do.	.64	.84	.94	.77	\$0.85
Women's coats and suits	July 1946	1.87	2.06			
Women's and misses' dresses	Apr. 1945	1.31	1.28	1.33	1.13	.94
Work pants, cotton	do.	.58	.81	.92	.79	
Chemicals and allied products:						
Chemicals, industrial	Jan. 1946	1.14	1.22	1.21	1.24	1.07
Drugs and medicines	July 1946	.92	.99	.98	1.05	
Paints and varnishes	do.	1.01	1.10	1.06	1.17	
Perfumes and cosmetics	do.	.78	.93	.94		
Soap and glycerin	do.	1.10	1.19	1.19	1.19	
Food products:						
Bread and bakery products	July 1945	.76	.96	.91	.99	\$0.97 1.06
Furniture:						
Wood furniture, other than upholstered	Oct. 1945	.70	.94	1.00	.93	.86 .86
Wood furniture, upholstered	do.	.96	1.30	1.36	1.18	
Leather products:						
Footwear	do.	.83	1.16	1.16		
Lumber	Aug. 1944	.72	² 1.18			
Metal products:						
Aircraft engines and parts	Jan. 1945	1.14	1.09	1.11		
Electrical generating equipment	do.	.98	1.06	1.13	1.34	1.13 1.15
Electroplating, plating, and polishing	do.	.88	1.02	1.01	1.15	
Fabricated structural steel	do.	.97	1.19	1.18	1.20	1.21 1.16
Ferrous foundries	do.	1.00	1.09	1.06	1.14	1.12 1.12
Iron and steel forgings	do.	1.18	1.31	1.26	1.21	
Machinery, miscellaneous	do.	.98	1.14	1.12	1.12	1.23 1.22
Machine tools	do.	1.05	1.08	1.11		
Machine tool accessories	do.	1.08	1.46			
Nonferrous metal foundries	do.	1.03	1.12	1.11	1.19	1.11 1.17
Power boilers	do.	.98	1.20	1.17	1.27	1.26 1.20
Radios, etc.	do.	.85	.96	.94	1.05	
Sheet-metal work	do.	1.06	1.35	1.32	1.46	1.27 1.45
Stoves and ranges	July 1946	1.08	1.30	1.31	1.29	
Tool and die jobbing shops	Jan. 1945	1.28	1.23	1.23	1.35	
Paper and allied products:						
Corrugated and fiber boxes	Oct. 1945	.78	.95		.92	
Folding paper boxes	do.	.79	1.00	1.04	.98	
Set-up boxes	do.	.68	.82	.80	.85	
Structural clay products	do.	.80	² .95			
Textile mills:						
Knit outerwear	July 1946	.98	.96			
Woolen and worsted	Apr. 1946	.94	.92			
Tobacco products:						
Cigars	Jan. 1946	.73	1.02	1.08		
Nonmanufacturing						
Auto repair shops	July 1946	.87	1.53	1.62	1.50	1.53 1.41
Electric light and power	July 1945	1.03	1.11			
Power laundries	do.	.52	.69	.66	.77	.69 .74
Retail trade:						
Clothing stores	Apr. 1945	.79	.92	.90	1.01	.79 .91
Department stores	do.	.67	.73	.69	.82	.74 .74
Limited-price variety stores	do.	.41	.55	.54	.61	.58 .60
Warehousing and storage	July 1945	.87	1.00	.94	1.05	1.05 1.04

¹ In this article Pacific region refers to the States of Washington, Oregon, California, and Nevada.

² Includes Pacific and Mountain regions.

war production (April 1943 to April 1945) and 18.3 percent during the reconversion and postwar period (April 1945 to October 1946), in contrast with comparable rises of 9.9 and 18.8 percent for the entire country (table 2). The slightly larger increases registered by the national index do not reflect loss of position by the Pacific region, but rather marked improvement in the relative position of certain low-wage areas and industries.

TABLE 2.—*Percent change in urban wage rates in manufacturing, by industry group, Pacific region and United States, April 1943 to October 1946*

Industry group ¹	Percent change from—					
	April 1943 to April 1945		April 1945 to October 1946		April 1943 to October 1946	
	Pacific region	United States	Pacific region	United States	Pacific region	United States
All manufacturing.....	8.2	9.9	18.3	18.8	28.0	30.6
Food and kindred products.....	4.3	7.7	23.1	20.2	28.4	29.5
Apparel and allied products.....	25.8	20.4	25.2	20.0	57.5	44.5
Printing, publishing, and allied industries.....	8.4	9.6	23.6	21.4	34.0	33.1
Products of petroleum and coal.....	² 1.1	.1	17.8	20.4	³ 19.1	20.5
Rubber products.....	15.9	8.2	12.5	16.6	30.4	26.2
Shipbuilding.....	² .8	2.1	17.3	15.9	³ 18.2	18.1
Other metal products.....	10.2	10.7	16.7	16.3	28.6	28.7

¹ Data for several industry groups included in the survey are not presented separately, largely because of the relatively minor position of these industries in the urban areas studied.

² October 1943 to April 1945.

³ October 1943 to October 1946.

POSTWAR INCREASES IN RATES

Increases in wage rates during wartime were held to moderate proportions as a consequence of the Government's wage stabilization program. These wartime advances in many industries resulted primarily from selective rate adjustments to individuals and to small groups of workers designed to correct various types of wage inequities, from the operation of incentive wage systems, and from "upgrading" classification practices of individual employers to meet labor market exigencies. Some industries important in the war effort also received across-the-board increases approvable under wartime wage controls.

With the consumers' price index registering an advance substantially in excess of the 15-percent figure to which wartime general wage increases had been geared by the Little Steel formula; with the disappearance of wartime earnings resulting from long hours of work and overtime and night-shift premium pay; with the sharp reduction in employment in the high-wage war industries and the reemployment

of workers in lower-wage peacetime industries—the stage was set after hostilities ended for organized labor to begin a drive for increases in wage rates. Upward revisions were granted by some companies as soon as wage controls were relaxed after VJ-day. The movement gained momentum during the last quarter of 1945, resulting in the formation of patterns of wage increase which influenced postwar wage adjustments in entire industries and areas. In contrast to wartime wage increases, these early postwar revisions in rate scales usually took the form of increases “across the board” or of uniform amounts for all workers.

By October 1946 the wave of postwar wage increases had covered the Nation. Wage rates on the Pacific Coast rose 18.3 percent between April 1945 and October 1946. As few upward wage adjustments occurred in this region between April 1945 and VJ-day, virtually all this gain can be accredited to postwar wage advances. The last quarter of 1946 saw the beginning of negotiations leading to “second round” wage adjustments.

Because the first major postwar wage revisions throughout industry were strongly influenced by the “pattern-setting” increase of early 1946 announced for a few major industries, there has been remarkable uniformity in the average amounts by which wage rates have been increased in various manufacturing industries during the postwar period. When translated into percentages of former base rates, these amounts, of course, appear as relatively larger gains for the lower-wage than for the higher-wage industries.

The movement of wage rates in some of the more important groups of industries found in urban areas of the Pacific region, and comparable data for the Nation as a whole, are shown in table 2. Most of the industries in the Pacific region have conformed closely to the pattern of increases shown by the country as a whole. The Pacific Coast apparel industry has improved its relative standing substantially, and the rubber industry to a lesser extent. The food industries have kept pace with other industries in postwar gains, but had relatively low wartime increases.

WAGE-RATE CHANGES IN PACIFIC COAST CITIES

Manufacturing wage earners in each of the major cities of the Pacific region—Los Angeles, San Francisco, Seattle, and Portland—have experienced postwar wage-rate gains somewhat similar to the regional average. Los Angeles rates registered the largest increase (19.5 percent between April 1945 and October 1946) and Seattle the lowest (15.5 percent). The trend of manufacturing wage rates in

these cities over the 3½-year period for which data are available is shown in table 3.⁶

Primarily because of much-higher-than-average gains during the period of wartime wage stabilization, Los Angeles wage rates in October 1946 showed a net gain of 32.5 percent over the April 1943 level (table 3), which is about 1.9 percentage points above the national average and 4.5 points above the average for the Pacific region. To some extent this greater percentage increase is attributable to the

TABLE 3.—Percent change in urban wage rates in manufacturing industries, Pacific Coast cities, April 1943 to October 1946¹

City	Percent change from—		
	April 1943 to April 1945	April 1945 to October 1946	April 1943 to October 1946
Pacific region.....	8.2	18.3	28.0
Seattle.....	4.0	² 15.5	¹ 20.2
Portland.....	1.4	17.8	19.5
San Francisco.....	2.1	16.9	19.4
Los Angeles.....	10.9	19.5	32.5

¹ October 1943 employment was used for weighting purposes in the combination of industry-area wage data. For estimates based on current employment weights, see footnote 6 below.

² Data partially estimated.

fact that Los Angeles had a lower original wage level than the other Pacific cities;⁷ but it is caused, in part, by the nature of her industries and by wartime wage-control problems arising from the complex and rapidly changing industrial structure of the area during the war period. The percentage figures do not, of course, indicate the extent to which increases in wage rates in Los Angeles have reduced the

⁶ Because basic data required for revising industry-area employment weights to conform to postwar distribution of employment are not yet available, the urban wage-rate indexes are still being computed using wartime (October 1943) weights. In view of major changes in employment distribution by industry, brought about in Pacific Coast cities by reconversion of war industries, the Bureau of Labor Statistics has computed the postwar changes in wage rates for the four major Pacific cities using estimated current employment weights. The difference between estimates thus derived for manufacturing industries and the wage increases derived from the use of October 1943 weights is shown below:

Area	Percent change, April 1945 to October 1946, using—	
	October 1943 employment weights	Estimated October 1946 employment weights
All manufacturing, Pacific region.....	18.3	19.9
Seattle.....	15.5	14.2
Portland.....	17.8	22.9
San Francisco.....	16.9	18.3
Los Angeles.....	19.5	21.6

⁷ See Intercity Variations in Wage Levels, Bureau of Labor Statistics Bulletin No. 793 (reprinted from Monthly Labor Review, August 1944).

previously existing disparity between her wage levels and those of the other Coast areas; and comprehensive data are not available for such an analysis. There is strong support, however, in the results of a number of industry-area occupational wage surveys conducted in 1945 and 1946 for the assumption that Los Angeles wage levels, in general, now approach those of Seattle, Portland, and San Francisco. Summary data from these surveys for the four cities are shown in table 1 (p. 611). In some industries, wages in Los Angeles exceed those in one or more of the other areas.

TABLE 4.—Percent change in urban wage rates in selected manufacturing industry groups, Pacific Coast cities,¹ April 1943 to October 1946

Industry group and city	Percent change from—		
	April 1943 to April 1945	April 1945 to October 1946	April 1943 to October 1946
Printing, publishing, and allied industries:			
Seattle.....	7.1	² 17.4	³ 25.7
Portland.....	2.1	22.7	25.3
San Francisco.....	13.9	27.5	45.2
Los Angeles.....	5.2	22.3	28.7
Products of petroleum and coal:			
San Francisco.....	³ 1.6	16.1	⁴ 18.0
Los Angeles.....	³ .7	19.4	⁴ 20.2
Shipbuilding:			
Seattle.....	.7	² 17.3	³ 18.1
Portland.....	³ .7	16.3	⁴ 17.1
San Francisco.....	.7	16.4	17.2
Los Angeles.....	³ 2.6	21.9	⁴ 25.1
Other metal products:			
Seattle.....	8.9	³ 14.5	² 24.7
Portland.....	1.3	14.5	16.0
San Francisco.....	5.2	13.2	19.1
Los Angeles.....	12.2	17.6	31.9

¹ October 1943 employment used as constant weights for combining industry and area data.

² Partially estimated.

³ October 1943 to April 1945.

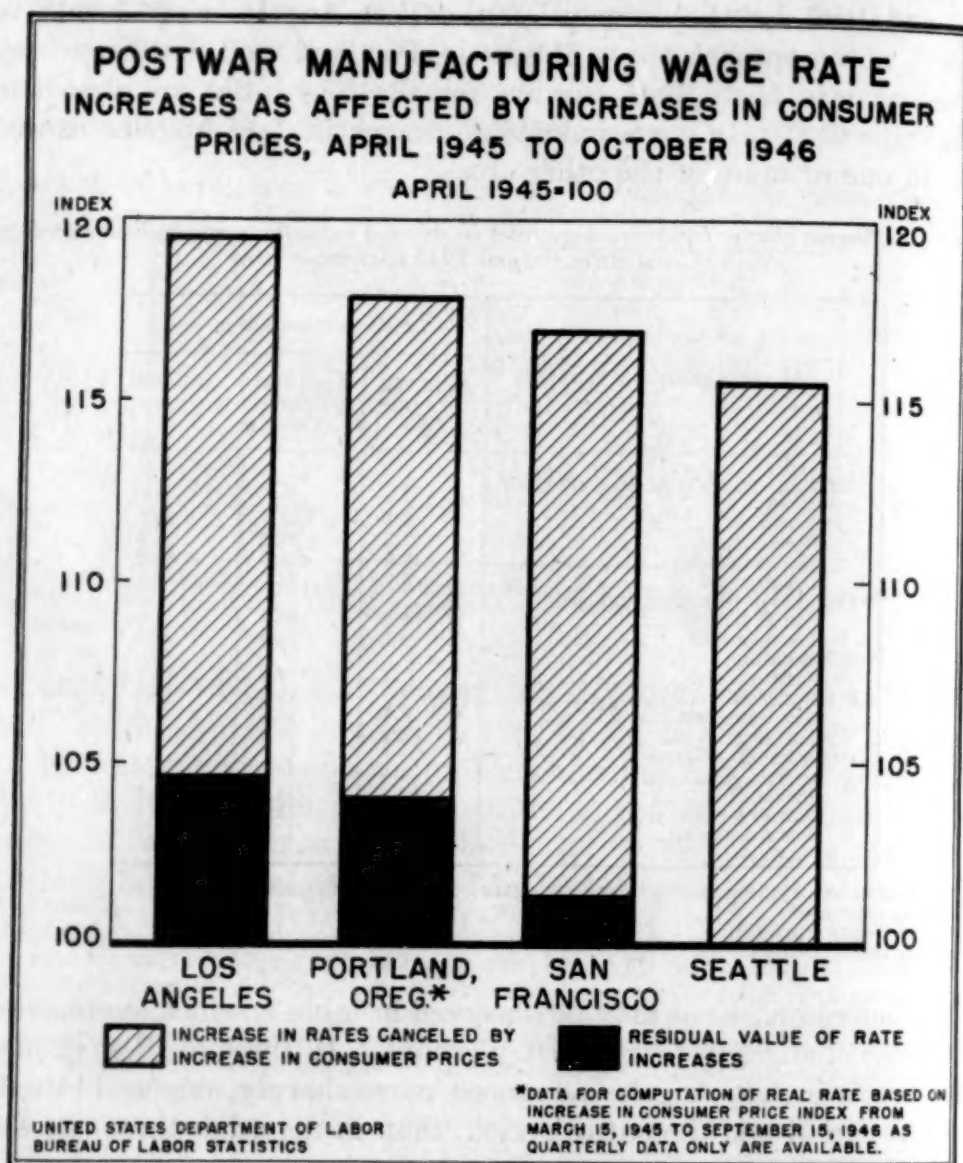
⁴ October 1943 to October 1946.

Further comparisons may be observed in table 4, which summarizes area wage changes in four industry groups. In three of these groups, wage levels in Los Angeles advanced more sharply, during both the postwar period and the entire period, than in the other three cities.

WAGE-RATE INCREASES AND CHANGES IN CONSUMERS' PRICES

The impressive increases in wage rates in the Pacific region during the postwar period are seen in somewhat different perspective when compared with changes in consumers' prices for the same period. In "real" terms—that is, in terms of the purchasing power of the rate increases—there was little change in rates in manufacturing between April 1945 and October 1946. This is indicated clearly in the accompanying chart, where the average increases in money rates are deflated by changes in the level of prices of selected goods, rents, and

services consumed by moderate-income families.⁸ It should be noticed that the comparison of changes in money wage rates and consumers' prices does not measure changes in the total "real" wage position of workers. For this purpose data on gross earnings would be required.



Recent Wage-Rate Trends in Nonmanufacturing

The nonmanufacturing industries in the Pacific region appear to have kept pace in terms of wage change with Pacific manufacturing during the 3-year period between April 1943 and April 1946.⁹ The

⁸ Real wage-rate indexes are computed by dividing actual wage indexes by consumers' price indexes and multiplying the result by 100.

⁹ Information on nonmanufacturing urban wage trends for periods later than April 1946 is not available.

urban wage-rate index for the five nonmanufacturing industries in the region advanced 24.3 percent over this period (table 5), while that for manufacturing showed a 21.3-percent increase. The Pacific region nonmanufacturing index for selected industries shows a relatively smaller increase, however, than the national nonmanufacturing average (29.5 percent). The difference between the regional and national indexes is traceable to the 2-year war period (April 1943–April 1945), during which time Pacific Coast nonmanufacturing wage rates increased only 9.8 percent, as contrasted with a Nation-wide average gain of 17.9 percent. Two obvious factors that contributed to the relatively low wartime increase (in terms of percent gain) are the region's original high wage level and the fact that wartime wage increases to adjust substandard wage scales were of only minor importance in the Pacific region.

TABLE 5.—Percent change in urban wage rates in selected nonmanufacturing industries Pacific Region and United States, April 1943–April 1946

Industry group	Percent change from—					
	April 1943 to April 1945		April 1945 to April 1946		April 1943 to April 1946	
	Pacific region	United States	Pacific region	United States	Pacific region	United States
All selected industries.....	9.8	17.9	13.2	10.0	24.3	29.5
Wholesale trade.....	0.5	9.2	14.5	8.6	15.0	18.6
Retail trade.....	13.6	24.0	14.8	12.7	30.4	39.7
Finance, insurance, and real estate.....	6.4	13.7	10.4	5.9	17.5	20.3
Local utilities.....	¹ 8.9	4.5	13.7	12.6	² 23.8	17.6
Service trades.....	³ 14.2	18.4	8.9	7.0	³ 24.4	26.9

¹ October 1943 to April 1945.

² October 1943 to April 1946.

³ Revision of previously published figures.

Postwar nonmanufacturing wage increases, on the other hand, exceeded the national average, registering a 13.2-percent advance between April 1945 and April 1946 in comparison with a 10.0-percent increase in the national average. It is interesting to note that the postwar advance in West Coast nonmanufacturing rates during this period again closely approximated the increase registered by the region's manufacturing rates for the same period (12.2 percent). If it could be assumed that a similar relationship between manufacturing and nonmanufacturing wage movements continued throughout the year 1946, the postwar increase in Pacific nonmanufacturing wage rates would be approximately 20.0 percent as of October 1946.

TABLE 6.—*Percent change in urban wage rates in selected nonmanufacturing industries, Pacific Coast cities, April 1943–April 1946*

City	Percent change from—		
	April 1943 to April 1945	April 1945 to April 1946	April 1943 to April 1946
Pacific region.....	9.8	13.2	24.3
Seattle.....	6.0	17.1	¹ 13.5
Portland.....	10.1	6.8	17.5
San Francisco.....	7.3	14.1	22.5
Los Angeles.....	12.3	17.0	31.4

¹ Partially estimated.

INDUSTRY AND AREA COMPARISONS

In common with Nation-wide experience, the most impressive wage gains in the nonmanufacturing industries studied were recorded by Pacific Coast retail trade, where rates advanced 30.4 percent over the 3-year period, including a 14.8-percent rise during the last year of the period. National average increases in this industry for comparable periods were 39.7 and 12.7 percent, respectively (table 5). Only in the gas and electric industry had over-all rate increases on the Pacific Coast exceeded the average for the Nation, but increases for the postwar period had exceeded the national average for each industry.

In nonmanufacturing, as in manufacturing, Los Angeles wage rates in general advanced to a greater extent than rates in other major West Coast cities (table 6), although the banking and service industries in Portland constitute important exceptions (table 7).

TABLE 7.—*Percent change in urban wage rates in selected nonmanufacturing industry groups, Pacific Coast cities, April 1943 to April 1946*

Industry group and city	Percent change from—		
	April 1943 to April 1945	April 1945 to April 1946	April 1943 to April 1946
Retail trade:			
Seattle.....	9.7	¹ 7.2	¹ 17.6
Portland.....	7.6	7.5	15.7
San Francisco.....	12.2	14.5	28.5
Los Angeles.....	17.3	20.1	40.9
Banks, trust companies, and loan associations:			
Seattle.....	⁽²⁾	⁽²⁾	⁽²⁾
Portland.....	15.3	7.0	23.4
San Francisco.....	5.1	9.9	15.5
Los Angeles.....	4.8	11.7	17.1
Service trades:			
Seattle.....	7.9	¹ 8.2	¹ 16.7
Portland.....	25.8	7.9	35.7
San Francisco.....	10.0	8.7	19.6
Los Angeles.....	16.9	10.7	29.4

¹ Data partially estimated.² Insufficient representation to permit separate presentation of data.

*History of Postwar Wage Negotiations on Pacific Coast*¹⁰

The upward movements in wage rates and hourly earnings for the postwar period described in the preceding section resulted almost wholly from general or across-the-board wage movements negotiated in the major West Coast industries. Some of these negotiations were industry-wide, some were pattern-setting adjustments made in key situations, and others were conducted largely on a local basis with little "pattern" influence. Some of the leading and dramatic wage changes which established the patterns of wage movement on the Pacific Coast between VJ-day and February 1947 are described below.

Aircraft.—General wage changes amounting to 15 percent have been negotiated in all major West Coast aircraft plants except one since VJ-day. Although industry-wide negotiations began immediately after the war's end with both of the unions active in the aircraft industry—the International Association of Machinists (Independent) and the United Automobile, Aircraft, and Agricultural Implement Workers (CIO)—these gave way to bargaining involving the individual companies and the unions separately. The 15-percent adjustments were negotiated individually for each company. In the one plant which did not follow the 15-percent pattern, increases of 16 cents an hour for job rates of \$1.10 or less, and 17 cents an hour for job rates in excess of \$1.10, were negotiated.

During the war, the aircraft industry in southern California was unique in the adoption of region-wide wage and job evaluation plans for both factory and office workers. Both were made effective by National War Labor Board directive orders and were administered by a tripartite panel known as the West Coast Aircraft Committee, with actions subject to approval by the Regional War Labor Board. Coincident with negotiations leading to the general wage increases, the uniform industry-wide wage plans (for both factory and office workers) were replaced with individual plant revisions of the wartime plan. In February 1947, the principle of job evaluation still prevailed, but industry-wide uniformity had been abandoned.

Building trades.—Postwar wage movements in the construction industry resulted from local negotiations, and their composite result is effectively illustrated by the Bureau's annual survey of union wage rates in the building trades.¹¹ Between July 1945 and July 1946, union rates for building journeymen increased 12 percent in Los Angeles, 16 percent in San Francisco, 12 percent in Portland, 8 percent

¹⁰ See also *Collective Bargaining on the Pacific Coast*, p. 650 of this issue.

¹¹ This series has been conducted annually since 1907. For the most recent comprehensive report for the United States as a whole, see *Monthly Labor Review*, January 1947 (p. 53). The data are collected by means of annual visits to union officials. Since June 1946, the data have been revised on a monthly basis for the seven occupations incorporated in table 8.

in Seattle, and 11 percent in Spokane, as compared with the national average increase of 11 percent for 75 cities.¹² Rates for building helpers and laborers during this same period increased 16 percent in Los Angeles, 22 percent in San Francisco, 19 percent in Portland, 11 percent in Seattle, and 12 percent in Spokane, compared with the national average increase of 16 percent in 75 cities.

Table 8 presents information on the effective union wage rates in several Pacific Coast cities for seven important building and construction occupations in both the war and postwar period. The dates

TABLE 8.—*Wartime and postwar changes in effective union rates in selected building-trades occupations, Pacific Coast cities, July 1941 to February 15, 1947*

Occupation and area	Effective union wage rate on—			Percent increase from—		
	June 1, 1941	July 1, 1945	Feb. 15, 1947	June 1, 1941, to July 1, 1945	July 1, 1945, to Feb. 15, 1947	June 1, 1941, to Feb. 15, 1947
Bricklayers:						
Seattle.....	\$1.650	\$1.845	\$2.105	11.8	14.1	27.6
Spokane.....	1.500	1.750	2.250	16.7	28.6	50.0
Portland.....	1.500	1.725	2.100	15.0	21.7	40.0
San Francisco.....	1.750	1.875	2.250	7.1	20.0	28.6
Los Angeles.....	1.500	1.500	2.000	0	33.3	33.3
Carpenters:						
Seattle.....	1.350	1.545	1.805	14.4	16.8	33.7
Spokane.....	1.250	1.440	1.750	15.2	21.5	40.0
Portland.....	1.200	1.375	1.750	14.6	27.3	45.8
San Francisco.....	1.250	1.500	1.750	20.0	16.7	40.0
Los Angeles.....	1.175	1.350	1.650	14.9	22.2	40.4
Electricians:						
Seattle.....	1.550	1.745	2.005	12.6	14.9	29.4
Spokane.....	1.375	1.550	1.750	12.7	12.9	27.3
Portland.....	1.500	1.580	1.800	5.3	13.9	20.0
San Francisco.....	1.500	1.700	2.000	13.3	17.6	33.3
Los Angeles.....	1.375	1.700	2.000	23.6	17.6	45.5
Painters:						
Seattle.....	1.350	1.545	1.805	14.4	16.8	33.7
Spokane.....	1.250	1.450	1.650	16.0	13.8	32.0
Portland.....	1.175	1.375	1.550	17.0	12.7	31.9
San Francisco.....	1.250	1.500	1.750	20.0	16.7	40.0
Los Angeles.....	1.000	1.250	1.500	25.0	20.0	50.0
Plasterers:						
Seattle.....	1.650	1.845	2.105	11.8	14.1	27.6
Spokane.....	1.675	1.750	2.100	4.5	20.0	25.4
Portland.....	1.500	1.725	2.100	15.0	21.7	40.0
San Francisco.....	1.667	1.750	2.250	5.0	28.6	35.0
Los Angeles.....	1.667	1.667	2.000	0	20.0	20.0
Plumbers:						
Seattle.....	1.550	1.745	2.200	12.6	26.1	41.9
Spokane.....	1.550	1.650	2.200	6.5	33.3	41.9
Portland.....	1.500	1.725	2.125	15.0	23.2	41.7
San Francisco.....	1.525	1.700	2.000	11.5	17.6	31.1
Los Angeles.....	1.375	1.750	2.000	27.3	14.3	45.5
Building laborers:						
Seattle.....	.950	1.145	1.405	20.5	22.7	47.9
Spokane.....	.800	1.000	1.150	25.0	15.0	43.8
Portland.....	.825	.950	1.350	15.2	42.1	63.6
San Francisco.....	.850	1.000	1.250	17.6	25.0	47.1
Los Angeles.....	.750	.875	1.150	16.7	31.4	53.3

¹ \$1.875 an hour to be effective March 1, 1947.

¹² It should be noted that the percentage changes were based on specific rates weighted by the number of members working at each rate. Only those quotations showing comparable data for both 1945 and 1946 were included. Specific increases during this 12-month period naturally reflect larger percentage increases among those classifications with comparatively lower scales. For this reason, those cities with lower scales tend to show greater percentage increases than those which have higher scales.

used in the table are the best available dates illustrative of significant war and postwar periods. June 1, 1941, represents the observation nearest to Pearl Harbor; July 1, 1945, the best available summary reflecting VJ-day rates; and February 15, 1947, represents the latest available information at the time this article was prepared.

Lumber.—Union organization in the basic lumber industry in the Far West is extensive. The principal unions are International Woodworkers of America (CIO) and the United Brotherhood of Carpenters and Joiners of America (AFL). More than four-fifths of the workers in the industry were employed in operations having contracts with one or the other of these unions.

In the Douglas Fir and Pine regions, the CIO union negotiated a 12½-cent-an-hour increase in November 1945.¹³ At about the same time, the AFL workers in the northern and central California districts also negotiated a 12½-cent increase.

Meanwhile, the AFL unions in the Pacific Northwest, out on strike from the end of September to the beginning of December 1945, obtained an increase of 15 cents an hour. Shortly thereafter, an additional 2½-cent increase was negotiated by the CIO workers in the entire region and the AFL Pine workers in northern and central California, bringing them to the total 15-cent postwar gain achieved by the Northwest AFL workers.

Subsequently, Douglas Fir and Pine workers of both unions have obtained additional increases—5 cents an hour retroactive to the spring of 1946, and 15 cents an hour retroactive to December 1946 or January 1947. Thus, the total postwar wage gain in these regions amounted to 35 cents an hour.

In the Redwood region, the postwar period saw the inauguration of a work stoppage which began January 14, 1946, and was still unsettled in mid-February 1947. The wage issue involved was a demand for an increase in the minimum rate from \$0.82½ to \$1.25 an hour. One large company has signed an agreement providing a minimum hourly rate of \$1.20 and a union shop. The other eight companies offered a minimum rate of \$1.25, but declined to grant a union-shop contract or to guarantee immediate return of union members to their old jobs.¹⁴ After the rejection of these terms by the workers, negotiations were discontinued.

Interarea wage differentials formalized by action of the West Coast Lumber Commission during the war were generally being maintained in February 1947, but the unions were attempting to eliminate them through collective bargaining wherever possible.

¹³ An unusual aspect of the CIO settlement was that fallers and buckers, who had enjoyed high incentive earnings during the war, were excluded from the 12½-cent increase unless their earnings averaged below \$13 for an 8-hour day.

¹⁴ The companies had reopened in July 1946 on a partial production basis with nonunion workers.

Motion picture production.—A 25-percent increase for mechanical, technical, and skilled workers, announced by one major producer on January 1, 1946, set the pattern for the industry. Similar wage adjustments subsequently negotiated with other producers were all retroactive to January 1, 1946. By February 1947, about 18,000 workers had been affected by increases, with some adjustments still in the negotiating stage. Additonal increases were given to such lower-paid classifications as janitors, policemen, laborers, and wardrobe workers. White-collar workers received increases averaging 31 percent between VJ-day and February 1947.

Petroleum refining.—Following VJ-day, during the fourth quarter of 1945 and the first quarter of 1946, an 18-percent industry-wide increase was negotiated and made retroactive to November 19, 1945—the time when most refineries had returned to a scheduled 40-hour workweek.

Negotiations for new contract rates were unofficially begun in September 1946, when the Oil Workers International Union (CIO) announced that it would seek a 20-percent general wage increase. On October 30, 1946, this demand was raised to 25 percent—an average of \$43.43 per month for each worker. Industry representatives, when negotiations officially opened on January 16, 1947, countered with a proposal of a \$35-a-month "cost of living allowance," to be effective from January 1 to June 30, 1947.

A compromise wage offer from the Standard Oil Co., calling for a pay boost of \$17.30 a month (or 10 cents an hour) plus a \$17.70 (10.2 cents an hour) "cost of living allowance," both to be retroactive to January 1 but effective only until June 30, was rejected by the union. On the morning of a scheduled strike, settlement was finally reached on an amended version of the compromise offer. Under its terms, the new wage rates will be effective until December 31, 1947, instead of June 30, with either side permitted to initiate wage negotiations after September 1. When this article was prepared, this settlement appeared to be the pattern for probable settlements of negotiations in all major oil companies on the West Coast.

The second-round Standard Oil Co. increase brings the total post-war wage increases to approximately 25 percent, plus the "cost of living allowance" of \$17.70 a month, which represents an additional 7 percent.

Printing.—Basic rates for all organized printing-trades workers, negotiated largely on a trade and city basis, averaged 28 percent higher in Seattle on July 1, 1946 than a year earlier. During this period, printing-trades workers in Los Angeles and Spokane registered an increase of 24 percent, Portland 22 percent, and San Francisco 19

percent. In each of these cities the extent of increase exceeded that of the national average (17 percent).

Public utilities.—During the first 9 months following VJ-day, electric light and power companies and their respective unions negotiated wage increases on an individual company basis. By June 1946, the "pattern" of these increases, most of which were negotiated in the first 3 months after VJ-day, was 16 percent¹⁵ for the Coast as a whole. The increases ranged from 6 percent to slightly more than 21 percent. In most of the large utility operations, the increases totaled 15 percent or more. In some establishments, the increases were settled in two or more steps, and some groups of workers received different amounts of increase than others, to adjust existing inequities. In some cases, the increases were temporary settlements pending the outcome of negotiations in other companies or industries.

The relevance of the patterns created by national settlements in the steel, petroleum, and automobile industries was a major issue in negotiations between the Pacific Gas & Electric Co. and the Utility Workers Union of America (CIO). On May 9, 1946, a fact-finding board was appointed by the Secretary of Labor to handle the case. The board's report was accepted by both sides. This settlement, together with increases totaling 18½ percent already negotiated by the International Brotherhood of Electrical Workers of America (AFL) for groups of workers organized by that union, gave all plant or "physical" workers employed by the company a total of 18½ percent in postwar wage adjustments, and yielded clerical workers about 20 percent.

Subsequent to May 1946, wage developments in West Coast electric light and power companies may be summarized as follows:

1. An 8½-percent increase to workers represented by the International Brotherhood of Electrical Workers of America (AFL) in all California companies.
2. No general wage increase to workers represented by the Utility Workers Union of America (CIO); at the end of February 1947, however, negotiations were under way for further wage adjustments based upon individual plant issues.
3. Increases of 11.7 percent in one company in the Pacific Northwest, and general wage increases in another of 8 cents an hour plus 6 percent.

In public utilities other than the electric light and power companies, varied increases were negotiated on an individual plant basis. Gas utility workers averaged about 17 percent, and water department

¹⁵ Report and Recommendations of the Fact-Finding Board in the Dispute between the Pacific Gas and Electric Co. and the Utility Workers Union of America, CIO * * * , U. S. Department of Labor, Washington, 1946 (mimeographed).

workers in major cities received about 10 percent, within a few months after VJ-day.

In the communications industry, two general wage increases were announced by the Pacific Telephone & Telegraph Co.—one on December 22, 1945, retroactive to December 1, and the other on May 18, 1946, retroactive to March 1, 1946. These two increases amounted to a total average general wage increase of 18½ percent since VJ-day, and applied to approximately 46,000 workers.

Shipbuilding.—In March 1946, all shipyard workers on the West Coast received an increase of 18 cents an hour, retroactive to December 14, 1945.

For shipyard machinists, this increase followed a strike of 140 days' duration in the San Francisco Bay area. At the end of February 1947, negotiations were under way following a union demand for an additional increase of 25 cents an hour.

Shipping and waterfront employment.—Wage developments on the West Coast involving shipping and waterfront workers have been handled on an industry-wide basis. The U. S. Conciliation Service, two fact-finding boards, a number of special investigations by a designated representative of the Secretary of Labor, and impartial arbitration have played prominent roles in the maze of postwar negotiations on wages and interrelated nonwage issues.

Major wage adjustments for seagoing workers reflect negotiations involving the following unions for licensed personnel: Masters, Mates, and Pilots of America (AFL), National Marine Engineers Beneficial Association (CIO), and American Communications Association (CIO). Unlicensed personnel were represented by the Sailors Union of the Pacific, Seafarers' International Union (AFL), the Marine Firemen, Oilers, Watertenders, and Wipers Association (Independent), and the Marine Cooks and stewards (CIO).

The first major postwar adjustment for unlicensed personnel amounted to \$45.00 a month to compensate partially for losses in wartime bonus earnings. Typical increases in ratings from VJ-day to the end of 1946 have been from \$100 a month to \$172.50 for able seamen; from \$110 to \$177.50 for firemen and watertenders; and from \$87.50 to \$150.00 for messmen. While these adjustments appear to be very substantial, there is no information available to permit a determination of the extent of changes in earnings after VJ-day.

In the longshore industry, prolonged negotiations for wage increases after VJ-day proved fruitless, and on April 5, 1946, the Secretary of Labor appointed a fact-finding board in order to prevent a strike. The board recommended an hourly increase of 22 cents, retroactive to October 1, 1945—the day after the expiration of the old contract. This recommendation, which established a basic hourly

rate of \$1.37, was accepted by the parties. In the fall of 1946 another increase of 15 cents an hour was reached through collective bargaining. It was also agreed that wages could be reviewed on January 1, 1947, at the request of either party; if no agreement could be reached, the issue would be determined by the impartial chairman for the industry. As a result of this provision, a 5-cent hourly increase, effective January 1, 1947, was awarded by the impartial chairman, bringing the basic hourly rate to \$1.57.

The results of these activities, as affecting wage changes for sea-going personnel and longshore labor up to the end of 1946, are reflected in table 9.

TABLE 9.—*Summary of general wage changes for unlicensed classifications of ship and longshore labor, August 18, 1945, to January 1947¹*

SHIP LABOR		
Date of adjustment	Adjustments	Percent of increase
1945		
Sept. 30	Increase of \$45 a month: First mate and first assistant engineer ²	16.9
	Fourth mate and fourth assistant engineer ²	22.8
	Able seaman.....	45.0
	Fireman/watertender.....	40.9
	Messman.....	51.4
Dec. 12	Overtime hourly wage rate adjusted to \$0.90 for all unlicensed ratings.....	
1946		
Jan. 4	Increase ranging from \$5.00 to \$45.00 for all licensed personnel: first mate and first assistant engineer.....	4.8
June 15	Overtime payable for work on Sundays at sea and Saturdays and Sundays in port. Overtime hourly wage increased from \$0.90 to \$1 for all unlicensed ratings. Increase of \$30.00 while at sea for masters, chief engineers, first mates, and first assistant engineers who do not stand sea-watches and who normally work a 44-hour week. Increase ranging from \$17.50 to \$52.50 a month for members of the Sailors' Union of the Pacific (SUP): ³ Able seaman.....	19.0
	Increase of \$17.50 a month for ratings of the National Union of Marine Cooks and Stewards (MCS-CIO): Messman.....	13.2
	Increase of \$17.50 a month for all ratings of the Pacific Coast Marine Firemen, Oilers, Watertenders, and Wipers (MFOWW-Independent); except one rating at \$27; and additional \$25 for day-men; and adjustments for others ranging from \$5 to \$25: Fireman/watertender.....	11.3
Sept. 19-24	Increase of overtime to \$1.25 for unlicensed ratings above \$200 Increase of \$2.25 to \$5 for certain MC and St ratings on freighters, and \$5 to \$7.50 on class A and B passenger ships.	
Nov. 23	Overtime hourly rate increased from \$1.25 to \$1.60 for licensed personnel..... Increase of \$5.00 for masters, chief engineers, first mates, and first assistant engineers who do not stand sea-watches and who normally work a 44-hour week. Increases ranging from \$33.00 to \$86.00 for licensed personnel.....	15.0
LONGSHORE LABOR		
1945		
Nov. 4	Increase in straight-time hourly wage from \$1.10 to \$1.15.....	4.5
1946		
June 15	Increase of straight-time hourly wage from \$1.15 to \$1.37.....	19.1
Nov. 23	Increase of straight-time hourly wage from \$1.37 to \$1.52.....	10.9
Dec. 26	Increase of straight-time hourly wage from \$1.52 to \$1.57.....	3.3

¹ Data based on table prepared by Pacific-American Shipowners' Association.

² Class B passenger ships: Victory type—C2, C3, and Manukai type.

³ Affiliated with the Seafarers' International Union of North America (SIU-AFL).

Local transit workers.—Although a combined measure of the various increases received by unionized local transit workers within specific cities is not available for the postwar period, a picture of post VJ-day movement can be obtained from a summary of important rate increases occurring in Pacific Coast cities between July 1, 1945, and July 1, 1946. In Los Angeles, rates for local 1-man cars and busses after 6 months were increased 28 cents an hour, and for the Pacific Electric Co., in the same city, 18½ cents. In San Francisco, rates for 2-man car operators in the municipal system rose about 10 cents during this period. In Portland, a gain of 17 cents was recorded for operators of 1 man cars and busses. In Seattle, regular bus operators, and in Spokane, bus operators after 1 year's service, received hourly increases of 11 and 10 cents, respectively.

Since July 1, 1946, municipal system streetcar and bus operators in San Francisco received an additional increase of 12½ cents. A further increase of 5 cents an hour has also been granted to bus operators in Spokane since that date.

Transportation—railroads and busses.—Railroad workers were involved in Nation-wide developments which culminated, in May 1946, in a general wage increase of 18½ cents an hour and a moratorium on changes in working rules for 1 year in the case of the operating brotherhoods.¹⁶

Transportation workers employed by the Pacific Greyhound Bus Lines also benefited by wage settlements extending over seven Western States. Settlement of an 18-day strike in October 1945, brought increases of approximately 10 percent. In October 1946, new increases averaging 12 percent were obtained through collective bargaining.

Trucking industry.—Union wage rates for motortruck drivers in the period between July 1, 1945, and July 1, 1946, increased 15 percent in Los Angeles, 18 percent in San Francisco, 9 percent in Portland, 16 percent in Seattle, and 14 percent in Spokane, compared with a national average increase of 11 percent.

¹⁶ Railway Wage Changes, 1941-46, Monthly Labor Review, September 1946 (p. 335).

Reconversion Experiences of Northwest Shipyard Workers¹

By mid-1946 only a third of a selected group of wartime workers in the Northwest shipyards had returned to jobs similar to those they held before the war. A substantial majority of the group surveyed in April 1945 were still residents in the shipyard areas in June 1946, despite the fact that 57 percent of them had been newcomers during the war. Following cut-backs in production and resultant lay-offs in the shipyards after VJ-day, many had taken jobs in peacetime activities at wage rates lower than those paid at the yards. Average straight-time hourly earnings for the group of workers studied in the summer of 1946 were 6 percent lower than in the spring of 1945. Compared to their prewar earnings, however, they averaged an increase of 64 percent on an hourly basis. Gross weekly earnings of 53 workers employed in 1941 and in the survey periods averaged \$56.43 in June 1946, compared with \$37.59 in early 1941 and \$71.49 in the spring of 1945. About 30 percent of the group studied in the summer of 1946 were unemployed.

The Northwest Shipbuilding Industry

Shipbuilding in the Pacific Northwest is concentrated in two areas—one around Portland and Vancouver on the Columbia River, about 100 miles from the Pacific Coast, and the other on Puget Sound. Before the war, the leading industries of the Portland-Vancouver area were lumbering, shipbuilding, fishing, and food processing. As shipbuilding expanded to meet the Nation's wartime needs, employment in shipyards, which was less than 400 workers in April 1940, grew in 4 years to a total of 120,000.

In Seattle and Tacoma, the principal cities in the Puget Sound area, lumber products, transportation equipment, and food products were the chief industries in 1940. Shipbuilding developed into a major activity during the war, and employment in the yards increased from a prewar total of about 6,000 to 95,000 in the summer of 1944.

In the Kaiser Co. shipyards, new construction methods and resulting high production early in the war attracted Nation-wide

¹ Prepared by Jean A. Wells and Elizabeth S. La Perle of the Bureau's Wage Analysis Branch. The field work for the survey was done under the immediate supervision of Jean A. Wells in the Bureau's regional office at San Francisco.

The study is part of the Bureau's Nation-wide work and wage experience studies, which covered more than 5,000 workers and were designed to illustrate the impact of reconversion. It summarizes the experiences of 400 workers selected at random out of an approximate 48,000 in the Todd-Pacific and Kaiser shipyards, in April 1945. Of the group originally studied, 371 were men and 29 women; 266 were white and 34 were Negroes. These workers were first interviewed in April 1945. Follow-up surveys were made in the winter of 1945-46 and in the summer of 1946.

attention. In December 1943, employment at the Vancouver yard reached its peak—39,000 workers. The number had declined to 28,000 by April 1945, when the first survey by the Bureau of Labor Statistics was made. Within 2 weeks after VJ-day, the work force was reduced to 13,000; subsequent reductions were smaller but continual, and in the summer of 1946, less than 100 employees (clerical and supervisory) remained.

83 The Todd-Pacific shipyard in Tacoma was used as a testing ground for prefabrication of ships. The favorable results of this technique led to its use in other yards on the West Coast. Aircraft carriers, numbering 52 in all, were the main product of the Todd-Pacific yard, although it also built many other types of vessels. In 1944, employment in this yard was at its peak, about 27,000 workers; but, by VJ-day, employment had dropped to 21,000, and it continued to decline. The 2,000 workers remaining in June 1946 were engaged in the decommissioning of Navy vessels.

The Wartime Labor Force

At the beginning of the war, only a small nucleus of skilled shipyard managers and workers was available in the Northwest. The Todd-Pacific yard drew largely on local sources for employees, but by the time operations were begun by the Kaiser Co. in Vancouver, other establishments had absorbed most of the available labor supply. The Kaiser Co. then inaugurated, in cooperation with the U. S. Employment Service, a Nation-wide recruitment program which brought workers from every State in the country. Because of the high rate of labor turn-over, this program was continued until early 1945.

Personal characteristics.—Of the 400 workers interviewed in the BLS survey of April 1945, 371 were men. At the Kaiser yards, in Vancouver, 15 percent of the workers studied were Negroes, in the Todd-Pacific yard at Tacoma, only 1 percent. Workers ranged in age from 15 years to 65 and over, averaging (median) 38 years. None of the women, however, was over 49 or under 20. About four-fifths of the workers studied were married and had dependents; three-fifths had from 1 to 3 dependents, and a fifth had 4 dependents or more. A majority were members of 3- to 5-person family groups, but less than two-fifths belonged to families with more than one wage earner.

Migration.—Fifty-nine percent of the workers at the Todd-Pacific yard lived in or near Tacoma in 1941, whereas only 18 percent of the Kaiser yard workers lived in the proximity of Vancouver at that time. Over half of the Kaiser workers migrated from communities a thousand or more miles from Vancouver, but not more than a fifth of the Tacoma workers traveled as far as a thousand miles.

Of the 400 workers studied in April 1945, 43 percent were residents of the shipyard areas in 1941, 8 percent came from other parts of the States in which the yards were located, approximately two-fifths came from other States west of the Mississippi River, and a tenth from east of the Mississippi.

Whether the in-migrant workers would remain in the Pacific Northwest became an important question after VJ-day. A substantial number could be absorbed in the peacetime work force, since additional workers were needed for postwar industrial expansion of the area. When 400 workers were interviewed in the spring of 1945, more than three-fifths of them indicated a desire to stay. In the summer of 1946, 70 percent of those 400 wage earners were still in the area; not more than 30 percent had departed, although 57 percent had been newcomers during the war.

A former South Dakota farmer wanted to remain in the Northwest, if he could find a job there. Since he was 58 years old, he expected he would have to accept maintenance or janitor work after the shipyard closed. But he considered that "a small sacrifice for the privilege of living in the Northwest." At the latest contact, he was still there and was employed in demounting housing units.

Of 96 out-migrants, slightly more than two-fifths returned to their 1941 communities. Some of the group (13 percent) remained in the same States as the shipyards but moved outside the area. The largest group of out-migrants (25 percent) went to the West North Central section of the country, which had supplied the greatest proportion of workers during the war. Some 23 percent were living in States east of the Mississippi River, 17 percent were in the West South Central section, about 8 percent were in the Southwest, and about 14 percent in the East North Central States.

A larger number of in-migrants to the Tacoma yard remained in the Northwest than of in-migrants to Vancouver, since, in the former area, peacetime industry offered greater job opportunities at acceptable wage rates.

About four-fifths of the white men, but only about two-fifths of the women, and one-fifth of the Negroes, remained in the summer of 1946. Reasons stated by women for leaving were such as, to join a husband released from the armed services, to accompany a husband looking for work elsewhere, or to care for sick relatives. Negroes left principally because of inadequate living conditions and difficulties encountered in finding jobs.

A 28-year-old Negro, in his search for employment during the war had moved from Missouri to Pennsylvania, then to Tennessee and to Idaho, before entering a Washington shipyard. Following his lay-off after the war, he continued his active search for work, moving

from Washington to Oregon, to Nevada, and to California. When last heard from, he had a job in southern California. Married, but without children, this young man was better able to travel in search of a job than some of his former coworkers.

Postwar Employment Experience

By mid-1946, only a handful of the workers were still employed by the shipyards. Of the 281 workers interviewed, about 60 percent had found jobs, 31 percent were unemployed, and 9 percent had withdrawn from the labor force.

TABLE 1.—*Employment status of Northwest shipyard workers, by sex, winter 1945-46 and June 1946*

Employment status	Number of workers					
	Winter 1945-46			June 1946		
	Total	Men	Women	Total	Men	Women
All workers.....	317	296	21	281	259	22
Employed by same company as in spring 1945.....	130	127	3	13	13	—
Employed by different employer.....	82	80	2	115	112	3
Self-employed.....	20	19	1	40	39	1
Unemployed and seeking work.....	66	58	8	87	80	7
In armed forces.....	3	3	—	2	2	—
Not seeking work.....	16	9	7	24	13	11
Employment status	Percentage distribution					
	Winter 1945-46			June 1946		
	100	100	100	100	100	100
All workers.....	100	100	100	100	100	100
Employed by same company as in spring 1945.....	41	43	14	5	5	—
Employed by different company.....	26	27	10	40	43	14
Self-employed.....	6	6	5	14	15	5
Unemployed and seeking work.....	21	20	38	31	31	32
In armed forces.....	1	1	—	1	1	—
Not seeking work.....	5	3	33	9	5	49

UNEMPLOYMENT

Sixty-six (or 21 percent) of the 317 workers reinterviewed in the winter of 1945-46 were unemployed. Unemployment of a week or more was experienced by 137 persons during the winter. Claims for unemployment compensation were filed by 88, and 59 actually drew benefits. Most of those who did not receive benefits were reemployed before the end of their waiting period. By the summer of 1946 the number of unemployed had risen from 66 to 87, and comprised 31 percent of the workers reinterviewed at that time.

A 44-year-old Negro welder was unable to find any employment after his discharge from the shipyard. Most of his working life he had been a grain farmer in Illinois. When interviewed in the winter of 1945-46, he said he wanted to remain in the area and would take

any job he could get. He liked farming but did not want to return to it until he could get enough money and machinery to start over again. When heard from in the summer of 1946, he had returned to Illinois and was still seeking a job. Without any savings, he was forced to accept aid from relatives to support five children.

Another unemployed worker, aged 46, at the winter interview, reported he had been unable to find a job. He was discouraged about opportunities in the Northwest, and was considering moving to California if he remained unemployed. The next summer, however, he was still living in Washington and still seeking work as an auto mechanic, his "usual" job.

Stricter age, race, and sex requirements set by employers, and fewer available jobs, were not the only reasons for unemployment among the former shipyard workers. Other important factors included the inability of many of them to qualify for available skilled openings and the reluctance of the same workers to accept lower-paying jobs which required less training and experience.

The USES in Portland had about 3,300 job openings at the end of June 1946, when unemployment in the area was estimated to be 23,500. More than half of these openings were in trade and service industries and offered low wage rates. About two-fifths were skilled and professional jobs, for which few applicants were sufficiently trained. The remainder, although they paid good wages, were physically strenuous or required the workers to live in logging and lumber camps away from their families.

Another factor influencing unemployment of these ex-shipyard workers in the summer of 1946 was the problem of economic readjustment which the Nation was facing. Hampered by material shortages, the peacetime economic activities of the Northwest could not expand sufficiently to meet accumulated consumer demands.

INDUSTRIAL AND OCCUPATIONAL SHIFTS

The prewar industrial and occupational experience of the workers illustrates the variety of fields from which a civilian labor force for war work was mobilized. Four-fifths of the 400 wage earners studied in April 1945 were employed in January 1941. The largest proportion (26 percent) were engaged in various manufacturing industries, followed, in order of the numbers employed, by agriculture, wholesale and retail trade, service industries, government service, and the transportation and public-utilities industries. Six percent of the group were unemployed and were seeking work, in January 1941. The remainder were students, housewives, or otherwise not part of the labor force.

TABLE 2.—*Employment status of selected northwest shipyard workers, by industry group, January 1941 and June 1946*

Industry group	Number of workers		Percentage distribution	
	January 1941	June 1946	January 1941	June 1946
All industry groups.....	400	281	100	100
Agriculture, forestry, and fisheries.....	48	13	12	5
Mining.....	15	2	4	1
Construction.....	39	31	10	11
Manufacturing.....	86	62	22	22
Wholesale and retail trade.....	43	18	11	6
Finance, insurance, and real estate.....	2	4	(¹)	1
Transportation, communication, and other public utilities.....	20	10	5	4
Services.....	44	24	11	9
Government.....	26	4	7	1
Industry not reported.....	2		(¹)	
In armed forces.....	3	2	(¹)	1
Not seeking work.....	49	24	12	9
Unemployed.....	23	87	6	30

¹ Less than 1 percent.

Occupations and industries in which the workers were employed in 1946 differed substantially from those of their usual, prewar experience. Only 30 percent of the workers who were reinterviewed during the winter (1945-46), and who had prewar employment experience, had returned to their prewar occupations. Less than a seventh of the group were employed in the same industry. There is indication that by the summer of 1946, more workers had returned to the industry in which they had worked before the war; at that time, about a fifth were in their prewar industry. Part, but not all, of this increased proportion results from the fact that fewer workers who had prewar employment experience were reinterviewed.

One worker was an insurance underwriter in Montana before he became a shipyard burner. Quitting before VJ-day to return home, he took a job as department head in a chain store. Not liking this work at all, he left after a short time, was unemployed for 3 months, and then again became a life-insurance underwriter.

Two major shifts took place in the occupational distribution. Whereas 16 percent of the group had been farmers before the war, only 5 percent could be so classified in June 1946. Before the war, 6 percent of the workers were proprietors or managers; in the summer of 1946, the proportion had doubled. This increase was stimulated by the relaxation of stringent wartime restrictions which had affected the normal turn-over of new businesses. Some workers were able to set themselves up in business by using savings accumulated during the war years; others were perhaps induced to strike out independently as a reaction to the restrictions of the large shipyards.

One man, who disliked the confinement of the shipyards, as soon as the war was over, quit and took a short vacation. Then, after

working a few months as a construction carpenter, he used his small savings to buy a band saw and lumber. During the Christmas season, he designed and constructed wooden toys. Since then he has remained at the woodworking business, making a variety of wooden articles.

Some of the prewar farmers had left their old homes and migrated to the Northwest with little intention of returning to the hard work on the farms. High wages and limited responsibilities at the shipyards further dissuaded them from resuming farm life.

One of these was a 32-year-old shipfitter. For more than 10 years he had been a farm hand, and for over 5 years, an independent corn and cotton farmer in Missouri; he left farming because of crop failures. When interviewed as a shipfitter, he stated he was planning to remain in the Portland area, mainly because of the higher wages. He had no intention ever to return to farming. His last-known job was that of ship painter in Portland.

About four-fifths of the workers were apparently making no economic use of their shipyard crafts in the months subsequent to their wartime employment. Mass-production operations at the shipyards had been so arranged that much specialized work could be done by those who had only limited training. As a result, the extent to which the shipyard skills could be utilized in work elsewhere was also limited.

For example, Mr. B., aged 34, was a grocery clerk before entering the shipyard. During the 3½ years he spent at the yard as an electrician helper and later as a journeyman, he learned new skills and liked the work. However, he did not plan to pursue the trade outside the shipyard, since he would have to become an apprentice first and, having a family, he could not live on the low wages. When last contacted, he was a salesman in a men's store.

HOURS AND EARNINGS

High wage rates such as those in the two shipyards studied, were an important inducement in drawing workers from other industries and areas to war work. By April 1945, 195 shipyard workers, for whom prewar (1941) wage-rate data were available, received an average increase over such rates of 45½ cents an hour. Straight-time hourly rates were increased 100 percent or more for a third of the group, increases of from 50 to 100 percent were experienced by a fourth, and a slightly higher proportion received increases of less than 50 percent. Four workers received the same wage rate in April 1945 as in 1941, and 17 had suffered a decrease.

TABLE 3.—*Changes in gross weekly earnings, weekly hours, and average hourly earnings of 53 identical Northwest shipyard workers, specified periods 1941-46*

Item and period	All workers	Workers with—	
		Same employer as in spring 1945	Different employer
Number of workers.....	53	6	47
Average gross weekly earnings:			
1941.....	\$37.50	\$41.11	\$37.15
Spring 1945.....	71.49	76.32	70.87
Winter 1945-46.....	53.42	51.98	53.60
June 1946.....	56.43	54.62	56.66
Average weekly hours:			
1941.....	45.9	45.8	45.9
Spring 1945.....	46.8	49.4	46.4
Winter 1945-46.....	42.5	38.8	43.0
June 1946.....	41.5	37.8	42.0
Average hourly earnings:			
1941.....	\$0.82	\$0.90	\$0.81
Spring 1945.....	1.53	1.55	1.52
Winter 1945-46.....	1.26	1.34	1.25
June 1946.....	1.36	1.45	1.35
Straight-time average hourly earnings:			
1941.....	.77	.84	.76
Spring 1945.....	1.42	1.41	1.43
Winter 1945-46.....	1.22	1.34	1.20
June 1946.....	1.33	1.45	1.32

Longer work hours (most workers were on a 45- to 48-hour week in April 1945), accompanied by shift differentials, contributed substantially to high gross weekly earnings. None of the workers in the spring of 1945 earned less than \$45 a week. Almost 70 percent of the group earned from \$60 to \$70 a week, and about 30 percent earned more than \$70.

Higher wartime wages were also reflected in the upward shift in the distribution in annual-income brackets from 1943 to 1944 (although some workers were already employed at the shipyards in 1943). Of the 400 workers studied, 377 reported annual income for the 2 years. Whereas 14 percent of these workers earned less than \$1,500 in 1943, that proportion was cut in half in 1944. Over \$4,000 was received by 7 percent in 1943, and by 14 percent in 1944. In 1943, 30 percent of the workers had an annual income of from \$1,500 to \$3,000, and 50 percent had from \$3,000 to \$4,000. In 1944, less than 25 percent were in the former income bracket and more than 50 percent were in the latter.

In the summer of 1946, hourly earnings of 53 employed former shipyard workers for whom data are available for all 4 periods averaged \$1.36, an increase of 66 percent over their prewar earnings. Hourly earnings for the same group had increased 8 percent on the average, between the previous winter and the summer of 1946. The rise reflects the general trend of wage rates during the year.

A journeyman shipfitter, who earned \$1.20 an hour in the yards, quit his job before hostilities ended to become an unskilled laborer in the nearby town where he lived. Although his new rate was only 90 cents, he reported that his net weekly earnings were maintained, because his transportation, lunch, and clothing costs had all decreased considerably. His rate on the new job has since been increased to \$1.125.

Wage rates in the Pacific Northwest, particularly in the shipyards and other war industries, were generally high in relation to those in other sections of the country. Of the 99 workers who reported wages earned outside the shipyards in the winter of 1945-46, 69 received lower rates, 5 equal rates, and 25 higher rates, than they had earned in the shipyards. Gross weekly earnings for all workers, which averaged \$70.36 in April 1945, declined to \$51.58 by the winter of 1945-46, reflecting generally lower wage rates in peacetime jobs as well as a reduced workweek.

A former journeyman welder at the shipyard, 26 years old, quit the yard to drive a dump truck for \$1.35 an hour on a construction project. As that job was located away from home, he soon left it for that of barker feeder at \$1.10 an hour, at a local paper mill. When logs became scarce, the paper mill shut down, and this man unsuccessfully sought other work for 2 months. He finally accepted employment as a dishwasher, at 71 cents an hour plus meals, in the restaurant where his wife worked. In a month, he was promoted to short-order cook at \$1.22 an hour. He was still working on this job when contacted 6 months later.

Gross weekly earnings for the workers increased to an average of \$56.43 for 41.5 hours by the summer of 1946 (table 3). These data probably understate somewhat the increase in earnings resulting from general wage increases in the spring of 1946. Earnings and rates for the winter of 1945-46 include those of a substantial number of workers still in the shipyards, which paid some of the highest rates in the area. Since few workers remained in the shipyards by June 1946, the summer earnings figures are composed almost entirely of rates in peacetime industries.

Pacific Northwest Economic Outlook — 1947

By NATHANAEL H. ENGLE, *Director, Bureau of Business Research, University of Washington*

THE NATURAL RESOURCES of the Pacific Northwest—Washington, Oregon, Idaho, and the western tier of Montana counties—originally shaped its economic pattern.¹ Exploitation of forest, agricultural, ocean, and mineral resources has built an economy which in the past has provided raw materials more than end products. Development through substantial Federal aid of hydroelectric energy, another type of natural resource, has altered the emphasis and turned the direction of economic growth toward industrial diversification. Not that the old will be abandoned, but that new industries will be added, is the promise of the future.

Characteristics of the Region

The Pacific Northwest, with an area of some 285,000 square miles, is dominated by the drainage basin of the Columbia River and its tributaries. Second in size in the United States to the Mississippi, this great river system has set its impress on the industrial future of the region through its actual and potential contribution to the development of hydroelectric power. A second natural feature of industrial importance is Puget Sound, a long arm of the Pacific Ocean which reaches nearly 200 miles east and south into the heart of western Washington, providing splendid deep water harbors, industrial sites, and unrivaled recreational facilities.

Three mountain ranges traverse the region from north to south: the coastal range, of which the Olympics on the northwestern thrust of Washington are the most dominant phase; the Cascades, which extend through both Washington and Oregon about 100 to 180 miles from the coast, broken only by the deep gorge of the Columbia River; and the Rocky Mountain system, which extends southeasterly across Idaho and Montana.

CLIMATE OF THE PACIFIC NORTHWEST

The climate of this region is a definite asset contributing to its industrial growth. Meteorologists have described the climate as "the most important environmental factor in the Pacific Northwest," the essential features being "a small annual range of temperature for the latitude, an abundant precipitation, most of which comes during the rather mild winter, a relatively cool summer, a long frost-free

¹ Occasionally the entire State of Montana is added where it is difficult or impossible to differentiate the statistics. In this analysis the more comprehensive area is used for the most part. However, in other articles in this issue, discussion of the Pacific Northwest is limited to the States of Oregon and Washington.

season, and wind from off the ocean nearly all year." This climate pattern prevails along the coast and shows increasing change in direct proportion to increasing distance from the coast.

NATURAL RESOURCES¹

The Pacific Northwest does not have abundant, fertile, arable soils. Of the total area, approximating 250 million acres, about 70 million acres are in forests, 60 million in arid or semiarid range land, 32 million in farm pasture, and 16 million under cultivation. It is estimated that between 8 and 9 million additional acres may ultimately be made available for agriculture by appropriate conservation measures. For example, the Columbia Basin project, on which work is now in progress, is expected to add about 1 million acres to cultivation.

Much of the land is publicly owned, 107 million acres being in Indian reservations, national parks, water development sites, mineral, forest, and grazing lands. State and local governments also have extensive holdings. Very little over half of the total acreage is privately owned.

Timber is one of the most important industrial assets of the region. Pacific Northwest forest lands contain 55 percent of the timber of the United States, although they comprise but 15 percent of the forest area. A comprehensive survey points out that "the standing timber in the region is estimated at around 883 billion board feet, of which roughly 47 percent is Douglas fir, found west of the Cascades. About 60 percent of this volume of timber is economically available. Of the total timber in the region, 50 percent is in Federal ownership and 42 percent is privately owned." The remainder is in State hands.²

Mineral resources of the Pacific Northwest are extensive and varied but have not been fully explored or tested as yet. Montana leads the region in the exploitation of minerals, followed by Idaho, Washington, and Oregon. Leading metals produced in the region are gold, silver, copper, lead, zinc, and mercury. Idaho produces 20 percent of the silver mined in the United States, and 25 percent of the Nation's lead. Montana contributes 20 percent each to the silver and copper production of the country. Washington produces copper, zinc, silver, and molybdenum. Gold and mercury are found in Oregon. Of the nonmetallic minerals, Washington has large deposits of bitu-

¹ For a more extensive background analysis of this subject see *Development of Resources and Economic Opportunity in the Pacific Northwest*, report of the Pacific Northwest Regional Planning Commission to the National Resources Planning Board (Washington, U. S. Government Printing Office), 1942; also, *The Pacific Northwest*, edited by Otis W. Freeman and Howard H. Martin (New York, John Wiley & Sons, Inc.) 1942.

² *Development of Resources and Economic Opportunity in the Pacific Northwest*, report of the Pacific Northwest Regional Planning Commission to the National Resources Planning Board (Washington, U. S. Government Printing Office), 1942, p. 7.

minous and subbituminous coal, limestone, alumina clays, fine clays and related materials for the ceramics industry, the latter being found also in Oregon and Idaho. During the war strategic minerals, normally submarginal, came into limited production. Manganese and chromium were mined in Montana; chromium in Oregon; tungsten in Idaho, Washington, and Montana; vanadium in Idaho; and magnesite and dolomite in Washington, to mention the more important. Of current interest is the discovery and testing of alumina bearing ores in Oregon.

Water resources are among the major industrial assets of the Pacific Northwest. The Columbia River and its tributaries and the coastal streams provide tremendous potentials for electric power, irrigation, navigation, and fisheries. It is estimated that the region has 40 percent of the hydroelectric power potential of the Nation, sufficient to generate 15 million kilowatts, 90 percent of the time. Installed capacity is now in excess of 2½ million kilowatts, nearly 6 percent of the Nation's total. For irrigation and flood control, possible water storage capacity in the Pacific Northwest is estimated as adequate for 50 million acre-feet of water, enough for all the land which is suitable for reclamation and irrigation.

Deep water harbors which accommodate seagoing ships are available in Puget Sound, Gray's Harbor, and in the lower stretches of the Columbia River. Plans for river improvement may ultimately permit navigation of the Columbia as far inland as The Dalles, 188 miles from the Pacific. In fact, some interests hope to open up the Columbia and the Snake to Lewiston, Idaho, 470 miles inland. Additional plans contemplate navigation of the Willamette River from Portland to Eugene, Oreg., about 170 miles south. Industrial sites contiguous to deep water harbors are abundant. Ample water is available for industrial uses, much of which requires no special treatment because of its freedom from salts and minerals.

Northwest water resources also include fisheries which are among the richest of the world. Moreover, joint Canadian-American commissions have negotiated salmon and halibut pacts which have proved successful in conserving these valuable species of food fish. Finally, water resources contribute to the wealth of the region through the provision of recreational facilities which attract a large volume of tourist trade.

POPULATION

Sparsely populated as a whole, the Pacific Northwest had less than 4 million people in 1940—not 3 percent of the national total—on a land area comprising 9 to 10 percent of continental United States. The population, 88.3 percent native white as compared with 81.1 percent for the United States as a whole, was concentrated largely

on the Coast, with over 70 percent of the total in Washington and Oregon. One-fourth of the people lived in the four larger urban centers of Seattle, Portland, Spokane, and Tacoma.

Industrial Diversification

Extractive industries.—This group ranked first in prewar (1940) employment of the people of the Pacific Northwest, providing jobs for over a quarter of the workers (table 1). Agriculture was the largest employer of manpower, giving work to one out of every five gainfully occupied persons in the area. On the average, a quarter of the total population lived on farms before the war, ranging from 19 percent in Washington to 38 percent in Idaho.

The total value of all farm products "sold, traded, or used by farm households," according to the Census of Agriculture, was 422 million dollars for the year 1939. Washington ranked first, followed in order by Oregon, Idaho, and Montana. The most important farm products were wheat, hay and other field crops, livestock, dairy and poultry products, fruits and vegetables, including potatoes and peas. There was considerable variation among the States in the value of farm products sold (table 2).

Wholesale and retail trade.—Second as a source of employment, wholesale and retail trading activities accounted for 18.3 percent of the jobs in the region in 1939 (table 1). Approximately 238

TABLE 1.—Percentage distribution of employed workers 14 years old and over in the Pacific Northwest, by industry group, 1940¹

Industry group	Percentage distribution of workers in—				
	Pacific Northwest	Idaho	Montana	Oregon	Washington
Extractive.....	26.1	42.7	40.0	23.6	19.0
Agriculture.....	20.3	36.7	31.8	18.3	13.8
Forestry and fisheries.....	.6	.5	.4	.5	.8
Logging.....	3.0	1.3	.5	4.1	3.5
Mining.....	2.2	4.2	7.3	.7	.9
Construction.....	5.5	4.5	4.8	5.3	6.2
Manufacturing.....	14.8	6.6	6.9	16.9	18.0
Food and related products.....	2.4	1.89	1.50	2.5	2.8
Sawmills and planing mills.....	5.1	2.26	1.21	7.2	5.7
Iron and steel.....	.6	.06	.12	.7	.8
Nonferrous metals.....	.6	.50	2.08	.2	.4
Transportation equipment, except automotive.....	1.1	.12	.01	.1	2.3
All other.....	5.0	1.77	1.94	6.2	6.0
Transportation and communication.....	8.0	6.6	8.0	7.9	8.5
Wholesale and retail trade.....	18.3	16.4	15.8	18.9	19.1
Finance, insurance, and real estate.....	2.9	1.7	1.9	3.0	3.5
Business and repair services.....	2.3	2.1	2.1	2.4	2.3
Personal services.....	7.1	6.0	6.0	7.6	7.3
Amusement, recreation, etc.....	.9	.9	.8	1.0	.9
Professional and related services.....	7.8	7.4	7.6	8.0	7.9
Government.....	4.9	3.5	4.8	3.8	5.9
Not reported.....	1.4	1.6	1.3	1.6	1.4
Total.....	100.0	100.0	100.0	100.0	100.0

¹ Source: Population—Second Series, U. S. Census, United States Summary, 1940, pp. 99, 100.

million dollars were distributed in pay rolls to the quarter of a million people earning their living in the distributive trades.⁴

TABLE 2.—*Value of crops and livestock sold, traded, and consumed on the farm in the Pacific Northwest, 1939*¹

Item	Value (in millions of dollars)				
	Pacific Northwest	Idaho	Montana	Oregon	Washington
All items.....	421.6	91.7	91.5	107.6	130.8
Livestock.....	93.4	24.1	30.8	23.9	14.6
Dairy products.....	52.7	10.6	5.6	15.4	21.1
Poultry and poultry products.....	27.0	2.6	2.3	9.9	12.2
Other livestock products.....	15.7	3.3	5.8	4.3	2.3
Field crops.....	144.9	39.7	38.4	27.0	39.8
Vegetables.....	9.1	1.3	.3	3.4	4.1
Fruits and nuts.....	31.7	1.7	.3	9.6	20.1
Horticultural specialties.....	5.4	.3	.3	2.1	2.7
Forest products.....	2.0	.3	.2	.9	.6
Consumed on farm.....	39.7	7.8	7.5	11.1	13.3

¹ Source: Sixteenth Census of the United States, Agriculture, Third Series, United States Summary, 1940, tables 38-40.

The total volume of manufactured products for 1939 was valued at 1,245 million dollars. About 174,000 wage earners received 221 million dollars in wages in addition to those receiving salaries, dividends, or profits from the industry.⁵

Transportation and communication.—The prosperity of a region as extensive and far removed from world market centers as the Pacific Northwest depends to a great degree upon adequate transportation and communication systems. Substantial land, air, and water facilities serve the territory. Four transcontinental railroads link the Northwest coast with the East, and another line runs south to California. Three major airlines maintain regular service in normal times. Other lines, both inter-regional and feeder have been started or have applied for operating permits. Coastal shipping in the Northwest engages in trade with Alaska to the north and with California to the south and, via the Panama Canal, with Atlantic and Gulf ports. Oceangoing lines carry passengers and freight to the Orient and other parts of the world. Before the war, 8 percent of the employed workers of the Pacific Northwest gained their livelihood from transportation and communication services. The percentage is not likely to change much, although expansion in absolute numbers employed will come as the region develops. Freight rates, which in the past have favored raw materials moving east and finished goods moving west are now undergoing a process of revision as the region's interest shifts to more advanced types of manufacture.

⁴ U. S. Census Bureau, *Censuses of Wholesale and Retail Trade, 1940*.

⁵ Source: U. S. Census of Manufactures, 1940.

The remainder of the gainfully occupied, about a third, are found in professional, personal, or business services of various sorts, in finance, real estate, or insurance, in the construction and building trades, or in Government service (see table 1).

Impact of the War

Demands of war found the Pacific Northwest region uniquely prepared to make major industrial contributions. The basic forest and food industries responded promptly to the increased load placed upon them. Shipbuilding and aircraft production, small industries before the war, sprang into the limelight and quickly became the largest employers of manpower in the region. To illustrate, there were less than 13,000 workers employed in these 2 industries in King and Kitsap Counties, Wash., at the time of the 1940 census. By January 1, 1943, the number had grown to more than 100,000 and the peak was not reached until a year later. In Clark County, Wash., across the Columbia River from Portland, Oreg., practically no shipbuilding existed in 1940, the census listing but 17 employed workers. On January 1, 1943, over 31,000 workers were employed.

More fundamentally significant, if less spectacular, developments occurred in minerals and metals, especially the electrometallurgical industries. Reference has been made to the mining of strategic minerals in response to war needs. Of more far-reaching importance are the industries attracted by the abundance of cheap hydroelectric power. Ferrosilicon plants were built at Wenatchee and Spokane, Wash., a ferroalloy plant was operated at Portland, Oreg., and a ferrochromium plant was constructed at Tacoma, Wash. Electrolytic manganese was produced at Hoodport, Wash. Electrolytic copper was and still is refined at Great Falls, Mont., and at Tacoma, Wash. Electrolytic zinc was and continues to be produced at Kellogg, Idaho, and at Anaconda and Great Falls, Mont.

LIGHT METALS INDUSTRY⁶

Outstanding progress has been made by the region in the production of light metals, particularly aluminum. The new industry was initiated by the establishment of two plants by private companies, one at Vancouver, Wash., in 1940, and the other at Longview, Wash., shortly after. As the war demands became pressing, three additional aluminum reduction plants were constructed by Defense Plant Corporation, one each at Troutdale, Oreg., Spokane and Tacoma, Wash. These five plants, when operating at capacity toward the end of 1943, were producing at an annual rate of nearly 600 million pounds,

⁶ For a comprehensive analysis of the light metals industry see *Aluminum, An Industrial Marketing Appraisal*, by Engle, Gregory, and Mosse (Chicago, Ill., Richard D. Irwin, Inc.), 1944.

well over twice the prewar capacity of the United States and over 25 percent of the greatly expanded war capacity. In addition to these reduction plants, a large, modern aluminum sheet rolling mill, with capacity of some 20 million pounds monthly was built by DPC near Spokane, Wash.

Four factors are decisive in the location of aluminum reduction works. First, there must be an abundant supply of firm or prime electric energy; second, the cost of electric energy must be low; third, the plants should be located close to tidewater to insure economical transportation for incoming raw materials and outgoing products; finally, there should be a large enough domestic or local market to enable the industry to get started and to develop more distant markets. Undoubtedly, these factors influenced the two private companies in their original selection of sites on the lower Columbia River. The first two factors, and the expanding demand of the West Coast aircraft industry for aluminum, were responsible for the later expansion financed by DPC. These plants were located in the region at the direction of the War Department.

During the war these aluminum plants were dependent on remote sources for alumina and other raw materials. With a fixed price of \$50 a ton and freight of \$8 a ton in train loads, the industry had to bear a high cost for the basic raw material. Offsetting factors were power and labor costs. Electric energy at \$17.50 per kilowatt, or about 2 mills per kilowatt-hour, is the cheapest in the country. While wage rates were and are high as compared with other regions, and especially with the Southeast, labor costs are lower. A study of eight DPC plants from all sections of the country showed labor cost per pound of aluminum in Pacific Northwest reduction plants to range from 6½ to 9 percent under the weighted average for the country, and from 24 to 29 percent under the highest cost plant. Only one plant, located in the Southeast where wage rates were very much lower, showed lower average wage costs per pound. No DPC plant showed as low total cost per pound of aluminum as the Pacific Northwest plants.

Efforts were made to overcome the potential postwar handicap of high freight rates on alumina by the construction of a commercial-scale pilot plant at Salem, Oreg., financed by DPC to test a process for extracting alumina from local clay. There was also a small plant in Salt Lake City, Utah, which attempted to produce alumina from alunite. Neither of these attempts to find a local source of alumina proved successful.

The light metals industry is also represented in the region by a magnesium plant located near Spokane, Wash. Using dolomite ore from north of Spokane and ferrosilicon made on the site, the plant

has annual capacity for 48 million pounds of magnesium. In view of the cost-price relationship it had been thought that this plant would have little prospect for postwar operations. However, when the plant was placed on sale by the War Assets Administration, in January 1947, two substantial bids were made for it. What the future of the magnesium industry generally will be cannot now be foretold. Extensive research both on production techniques and processing has been underway for several years at Washington State College, which ultimately may unlock secrets for the more efficient production of magnesium from local ores as well as for advanced techniques in its use.

One of the most intriguing and perhaps the largest war plants in the region was the plant at Richland, Wash., which played so vital a role in the production of atom bombs. Operation of this plant was taken over by a large electric company. For 1947 and subsequent years, the program proposed, "under the sponsorship of the Manhattan Division of the United States Corps of Engineers, will consist of two parts. One will be fundamental research and the other construction and development."⁷ Employment fell from 6,000 at the war peak to 5,000 in October 1946. No estimate is available for 1947.

Other wartime developments worthy of mention lie in the chemical field. At Portland, Oreg., two calcium carbide plants were built, with a third at Tacoma, Wash. A modern coke plant was erected at Tacoma using coal from local mines. Two companies have chlorine and caustic soda plants at Tacoma, one of the companies also operates a sodium and potassium unit at Portland. Synthetic alcohol plants were constructed by DPC at Bellingham, Wash., using pulp mill waste, and at Salem, Oreg., using wood waste. The Bellingham Plant, now in private hands, continues operation. Operations in the field of adhesive resins, used largely in the plywood industry are found in Seattle, Wash., Portland, Oreg., Tacoma and Hoquiam, Wash. Substantial beginnings have been made in plastics and in molded plywood.

While less spectacular than the shipyards and the light metals, bomber, and bomb plants of Washington and Oregon, the contributions of Montana and Idaho industries were by no means unimportant. The mining industries contributed copper, lead, zinc and such essential strategic war minerals as chromium, manganese, tungsten, and vanadium. Moreover, these industries, as well as cattle and sheep raising, and other agricultural pursuits, had to contend with a continual labor shortage brought about by the shift in population to the

⁷ Margaret L. Schleef and John A. Guthrie, *The Pacific Northwest's Economic Outlook for 1947*, in *Pacific Northwest Industry*, December 1946, p. 37.

higher-wage war industries on the coast. Inland communities were drained of skilled mechanics, plumbers, and electricians until it was difficult to keep automobiles, trucks, and farm machinery in working order.

The effect of the war on Pacific Northwest industry may be summarized in the indexes of business activity compiled by the Bureau of Business Research of the University of Washington.⁸ The Puget Sound area as measured by the index reached its peak in February 1945 when it stood at 262 (1935-39=100). The August 1945 figure was 237, which was also the average for the entire year 1945. In contrast, the index of the Portland-Vancouver or Lower Columbia River area did not climb as high as did the Puget Sound area index. The high point, reached in February 1945, was 195. The Inland Empire area, centering in Spokane, Wash., and including much of eastern Washington, northeastern Oregon, northern Idaho, and western Montana was somewhat slower than the coastal territories in feeling the effects of the war boom. A smaller volume of war contracts was let in this area. These facts are reflected in the index which reached its wartime peak of 171 in January 1945.

WARTIME SHIFTS IN POPULATION

Between July 1, 1940, and July 1, 1944, according to the Census Bureau estimates, civilian population, had risen from 3,910,204 to 4,266,176, a net gain for the region of over 9 percent (table 3). By July 1945, the total had dropped slightly to 4,252,629. Actually the 1940-44 gain was concentrated in Oregon and Washington. By 1945 Washington's population had expanded still further to 2,088,574, while Oregon had dropped back slightly to 1,206,322. Idaho and Montana continued to record losses.

Studies of the in-migrant war population in the Puget Sound and Portland-Vancouver areas revealed the fact that approximately a third of the war workers moved from other points of the Pacific Northwest and a large share of the remainder from points due east to the Great Lakes. Only a sprinkling came from the industrial East or the South. Among those from the Southeast, however, were several thousand Negroes. The Negro population of the Puget Sound area as reported by the Census Bureau increased from 5,242 in 1940 to 9,792 in 1944, not quite double. More than a fivefold increase is recorded for the Portland-Vancouver area, where the number of Negroes rose from 2,105 in 1940 to 11,316 in 1944. Total nonwhite population has shown very little change, the figures being 31,301 in 1940 and 32,901 in 1944.

⁸ See *Pacific Northwest Industry*, monthly publication, Bureau of Business Research, University of Washington.

What actually has happened is a substitution of Negroes for Japanese. The evacuation of Japanese from the coastal region as a military precaution offset in numbers the influx of Negroes.

TABLE 3.—*Civilian population in the Pacific Northwest, by State, 1940 and 1944*¹

Area	Population	
	1940	1944
United States.....	131,669,275	132,563,271
Pacific Northwest.....	3,910,204	4,266,176
Idaho.....	524,873	531,573
Montana.....	559,456	464,999
Oregon.....	1,089,684	1,214,226
Washington.....	1,736,191	2,055,378

¹ Source: U. S. Bureau of the Census: Population Special Reports, Series P-45, No. 2, March 10, 1945, p. 2.

The Future of the Pacific Northwest

As the foregoing facts indicate, the future of the Pacific Northwest should be bright. Existing evidence suggests that the population of the region will continue to expand at a rate somewhat above that of the 1930-40 decade. Moreover, for Oregon and Washington, that expansion will be based, not on the prewar but on the war peak level or near it. Idaho and Montana have regained most if not all of their wartime losses in population, but the Coast States have more than made up for such wartime shifts by the influx of veterans from other States and by new families.

To illustrate, the labor force in Washington was 717,000 in 1939, with employment at 608,000 and unemployment at 109,000. At the war peak the labor force was slightly in excess of a million, with employment close to 1,000,000 and unemployment negligible. In 1943 a survey of the postwar plans of workers and employers indicated that the labor force would be 829,000 a year after victory, with employment at 743,000 and 86,000 unemployed. Actually, in July 1946, the labor force was 913,500, of whom 843,500 were employed and 70,000 unemployed; many of the latter were veterans who had not yet found themselves and women war workers who continued to draw unemployment compensation with little intention of remaining in the labor force. In January 1947, the State Office of Unemployment Compensation and Placement reported that "the downward trend which has characterized State-wide employment since the end of the war was nearly halted by the middle of November" (1946) and that "employment is probably stabilized, at least until the spring of 1947."

The outlook for specific industries and geographic divisions of the Pacific Northwest is also on the whole encouraging. This is particularly true of aircraft and shipbuilding. James E. Louttit, manager of

the Industrial Department of the Seattle Chamber of Commerce, states that one large aircraft company "has a backlog of \$150,000,000 in orders for Stratocruisers and other heavy aircraft exclusive of army orders. The employment level is approximately 11,000, which may be increased slightly as actual production of planes gets well under way."⁹

In shipbuilding, deflation appears to have run its course. Some yards are closed down permanently. Others are operating on repair work or building fishing and other commercial craft. Norman J. Box, manager of the Bremerton Chamber of Commerce, writes of the Puget Sound Navy Yard:

We do not expect, of course, anywhere near our wartime peak of employment, but undoubtedly a great many more persons will be employed in this yard than before the war. The wartime peak of employment was 32,500 and we expect this to level off at around 10,000 on a more or less permanent basis.¹⁰

An over-all estimate is that shipbuilding will continue at 23 percent above prewar.

Even shipyards built exclusively for the war effort have not been wholly valueless. Prof. Wesley C. Ballaine of the University of Oregon points out that—

The salvage value of the shipyards when used for industrial purposes is surprisingly high. Conversion of the Swan Island yard (near Portland) has progressed substantially. At present a mobile concrete mixer is being manufactured there for a Portland distributor, and machine-shop work is performed for logging and sawmill machinery manufacturers. One of the proposed products to be made there is an aluminum clothes drier for a Portland manufacturer. * * * interests, which have leased a portion of the area, plan to encourage aluminum fabrication for industrial concerns in the vicinity in order to provide additional markets for the aluminum rolled at * * * Spokane * * *.¹¹

Uncertainties as to the future of the aluminum industry have yielded to optimistic hopes. The Vancouver, Wash., plant is operating at capacity and the company is working on plans for a local source of alumina, possibly using Oregon ores. The company operating the Longview, Wash., plant has leased the Troutdale, Oreg., plant and has it in operation. Another company has leased the Spokane, Wash., reduction plant and the aluminum rolling mill and purchased the Tacoma, Wash., reduction plant. Plans are under consideration for a local alumina plant by this company also.

Markets for aluminum will determine the future of these operations. In addition to the aircraft industry, which continues to be a heavy

⁹ Pacific Northwest Industry, December 1946, p. 46.

¹⁰ Idem, p. 43.

¹¹ Oregon, by Wesley C. Ballaine, in Pacific Northwest Industry, pp. 54-55.

consumer of aluminum, many new users of aluminum are appearing in Portland, Spokane, and Seattle.

Several small fabricating plants which make use of the aluminum of the rolling mill have sprung up in Spokane County. Although not as large as the rolling mill and reduction plant, they are playing an increasingly important role in the manufacturing of eastern Washington. The largest employs approximately 125 people and seems to be maintaining this level. The future of these plants is still uncertain, and further expansion is limited at this time by a shortage of building and production materials and by a shortage of labor. Most of these fabricating plants have sprung up since the war, and in 1947 their permanency should be determined.¹²

Professor Ballaine writes: "There has been a marked growth during 1946 of small firms in the Portland area using aluminum for the manufacture of such items as griddles, pots and pans, wheels, pulleys, castings, etc. It seems reasonable to anticipate further expansion of this kind."¹³

Pacific Northwest aluminum plants have too great capacity, however, to count on West Coast markets, which at best are not likely to absorb more than 20 to 25 percent for some years to come. Reliance must be placed on export outlets and sales to the industrial consuming centers of the Great Lakes area. Potentially low costs make possible effective competition in these markets, especially when a Pacific Northwest alumina plant is in operation.

In contrast to the widespread anticipation of industrial expansion and diversification on the coast and at Spokane is the less optimistic outlook for Montana and to a lesser extent for Idaho. As Prof. Robert C. Line of Montana State University puts it: "Montana needs new industries. These have to be built from the ground up. She does not have idle buildings which were war plants 2 years ago. She does not have surplus labor waiting for employment."¹⁴

Certain limiting factors on industrial expansion of the entire region should be kept in mind. The Pacific Northwest shares with the Nation the general shortage of skilled labor and lack of housing facilities as well as difficulties in getting materials and labor for industrial construction. It seems strange to suggest the possibility of a shortage of electric power, in view of the great Bonneville and Coulee dams which, when built a few years ago, offered capacity far beyond the foreseeable needs of the region. If the aluminum industry continues to operate at anywhere near capacity, however, very little surplus power will be available for new industrial expansion.

¹² Margaret L. Schleef and John A. Guthrie, *op. cit.*, p. 38.

¹³ *Op. cit.*, p. 56.

¹⁴ Western Montana, by Robert C. Line, in *Pacific Northwest Industry*, December 1946, p. 53.

The agricultural picture is admirably summed up by Prof. John A. Guthrie of Washington State College. "The outlook for agriculture in 1947 is clouded by the uncertainty of general business conditions and the threat of further labor troubles." Even if employment, production, and income are at a high level, he goes on to say—

* * * This may not result in a proportionate demand for farm products, inasmuch as there is still a tremendous accumulated demand for many manufactured goods which were not available during the war. Consumer spending may be directed heavily towards scarce durable consumer goods.

Prices of many farm products are expected to continue relatively high in 1947, although they may decline in the latter part of the year.¹⁵

Other authorities in the region are less optimistic about farm prices. However, large yields are anticipated which should mean substantial farm incomes even though prices are lower.

The outlook for the basic forest products industries is encouraging. Demand for housing is expected to insure a strong market for lumber for several years to come. New forest "access roads" have been opened up which permit logging operations not hitherto possible. There is also the technological development called "relogging" which enables cut-over areas to yield additional revenue by setting up small portable sawmills to use "small trees, broken logs, tops, etc., that were left by the first operation because the cost of transporting them to a mill was greater than their value."¹⁶ Now only the lumber has to be taken out. Conservation and selective logging continue a part of the long-range program of the industry with the ultimate objective of a sustained yield from forest resources.

Fisheries is another Pacific Northwest industry with a promising future. Before the war the "take" of fish from the Pacific Northwest waters, including Alaska, was equal to that of the New England States, a 20-million-dollar industry. New developments for 1947 include factory ships, deep-sea trawlers equipped to catch the king crab, sole, and other bottom fish as far north as the Bering Sea, and also to clean, sharp freeze, and package the product, and return to port with as much as 200 tons of fish ready for market.

Foreign trade prospects of the Pacific Northwest should begin to materialize in 1947. New companies have been organized and plans laid to enter into aggressive promotion of foreign trade as international conditions permit. Plans are also afoot for a foreign trade zone in the Puget Sound area. An exhaustive study of the possibilities of such a zone has recently been completed.¹⁷

¹⁵ Op. cit., p. 38.

¹⁶ Ballaine, op. cit., p. 55.

¹⁷ A Foreign-Trade Zone for Puget Sound: Its Economic Desirability and Feasibility, by Prof. Charles J. Miller, University of Washington, published by the Washington State Department of Conservation and Development, Olympia, 1947.

Finally, the tourist industry of the Pacific Northwest offers immediate prospects for 1947 and 1948 that may be measured in terms of millions of dollars annually. The findings of a recent survey indicate a 200-million-dollar annual potential tourist trade for the State of Washington alone, once the necessary accommodations for tourists are provided.¹⁸

Summing up, the economic outlook for the Pacific Northwest for 1947 is as good as or somewhat better than for 1946, assuming no serious national recession. Population growth is expected to continue, with employment opportunities keeping pace. Unemployment, which has been low during 1946 despite serious problems of reconversion, including an influx of more than the region's prewar share of veterans, is not expected to rise greatly. In fact, labor shortages, which have held back certain industries, notably construction and building, are likely to continue. Incomes will probably remain high on a per capita basis, assuring a better than average as well as a growing market within the region.

¹⁸ The Tourist Industry of Washington, by Mr. Robert G. Seymour, Bureau of Business Research of the University of Washington, made for the State of Washington Department of Conservation and Development, 1946.

Collective Bargaining On The Pacific Coast¹

By CLARK KERR, *University of California*

TRADE-UNION activity is now almost a century old on the Pacific Coast, dating from the "Gold Rush" days in California. A diverse and increasingly powerful trade-union movement has developed. Organization is more complete than in most other parts of the Nation.² The movement has a tradition of aggressive action as attested by the general strikes of Seattle (1919), San Francisco (1934), and Oakland (1946); the Wheatland hop riots (1913); the Everett (1916) and Centralia (1919) "massacres" in the days of the Industrial Workers of the World (IWW); the union domination of politics on two occasions in the history of San Francisco and one in Seattle; and the episodes of the bombing of the Los Angeles Times (1910) and the Tom Mooney case in San Francisco (1916)—among other illustrations. Employers also have organized in strong and aggressive associations. In recent times the "master agreement" negotiated between a union and an employers' association has become the increasingly accepted instrument of collective bargaining. Multiemployer bargaining is sufficiently widespread to be the standard pattern.

Union Agreement Coverage

Collective bargaining is more widespread on the Pacific Coast than in the United States generally. In 1945 throughout the Nation, about 48 percent of the workers in occupations over which unions claim active jurisdiction were covered by written collective bargaining agreements.³ On the Pacific Coast, an estimated 57 to 63 percent of the workers "eligible" are covered by agreements.⁴

Approximately 3½ million workers on the Pacific Coast are now "eligible" for coverage by union agreements.⁵ About 60 percent actually work under such arrangements.

This comparative strength of the trade-unions on the West Coast is even greater when examined in conjunction with the industrial structure of the region. Nation-wide, the greatest degree of organization generally exists in manufacturing employment. Such employment on

¹ The author wishes to acknowledge the assistance of the members of the staff of the Institute of Industrial Relations, University of California (Berkeley), and particularly of Carl Campbell.

² Already by the turn of the century San Francisco was considered "the most completely closed-shop community in the United States."—Ira B. Cross: *History of the Labor Movement in California* (Berkeley, University of California Press, 1935), p. 261.

³ U. S. Bureau of Labor Statistics: *Extent of Collective Bargaining and Union Recognition, 1945* (Bulletin No. 865, reprinted from *Monthly Labor Review*, April 1946, with additional data).

⁴ Estimated from data obtained from government, union, and industry sources.

⁵ The Bureau of Labor Statistics definition of "eligibility" (Bulletin No. 865, op. cit.) and current estimates of total employment have been used.

the Pacific Coast at the time of the 1940 census accounted for 17.9 percent of the gainfully employed, as compared with 23.4 percent for the entire Nation. Although manufacturing has expanded comparatively in the Pacific Coast States since that time, it does not yet equal the national average. This means that despite the handicap of less industrialization, the unions have been able to surpass the national average in the degree of their influence over employment conditions. The nonmanufacturing industries are unusually well organized.⁶

The coverage of collective agreements is not uniformly distributed on the Coast. It is substantially more complete in Seattle and San Francisco, which are the oldest and strongest centers of union organization, than in Portland and Los Angeles. Employees in Alaska for some time and in Hawaii recently have been at least as fully covered by union agreements as those in California, Oregon, and Washington.

The American Federation of Labor has a greater preponderance of union membership in this region than it has throughout the Nation. This is explained, in part, by the lesser development of manufacturing, in which field the Congress of Industrial Organizations has most of its members. The AFL also had progressed farther in its organizational efforts on the Pacific Coast, particularly in San Francisco and Seattle, by the time the CIO was established, than it had in most other parts of the Nation. The AFL has almost exclusively organized the building, the printing, the service, and the metal trades, local transportation, and retail and wholesale distribution. It has also been the dominant organizer of such prominent West Coast industries as motion picture production, fruit and vegetable canning, shipbuilding, and pulp and paper manufacturing. The textile, rubber, electrical products, steel, and automobile industries, in which the CIO predominates, are not of great importance on the Pacific Coast. The CIO is dominant on the Coast in the oil, longshore, and fishing industries, among others. The two organizations share jurisdiction in the lumber, aircraft, and water-transportation industries.

Development of Characteristic Collective Bargaining Systems

LONGSHORING

No collective bargaining system on the Pacific Coast has attracted as much continued public notice in the past decade and a half as that on the water front. The longshore industry is the connecting link between water-borne transportation and shore-side industries. When this link breaks down, both the maritime industry and many manufacturing industries are quickly affected. The economic life of San Francisco is particularly dependent on its water front.

⁶ See footnote 3.

Unionism on the water front dates back almost a century. Cargo handlers undertook their first strike in San Francisco in 1851.⁷ The Riggers and Stevedores Union Association, established in 1853, was a tightly knit organization with certain guild characteristics. Foremen were members of the association, and an initiation fee of \$100 was charged. Until 1886 the Riggers and Stevedores Union Association was the only organization in the field. In that year two new groups appeared, one of them affiliated with the Knights of Labor.

National organization first developed in 1892, when the precursor of what is now the International Longshoremen's Association [(AFL)] was formed. Shortly thereafter the three West Coast unions, together with a fourth which had since come into being, affiliated with the national organization. Joint action in San Francisco of longshore locals and other maritime unions was attempted from 1891 to 1906 in the City Front Federation, and of longshore locals on a coastwise basis from 1908 to 1916 in the Longshoremen's Union of the Pacific.⁸ Pacific Coast unity came to an end with the coastwise strike of 1916, which was lost. "Rustling cards" were introduced; these contained a history of the individual longshoreman's union activity, if any, and had to be presented when employment was sought in employer-controlled hiring halls. The San Francisco longshoremen lost another strike in 1919 and organization virtually disappeared on the Pacific Coast, except for the "Blue Book Union" under employer sponsorship.

With the Nation-wide stimulation which the National Industrial Recovery Act gave to union organizations, locals of the International Longshoremen's Association began to reappear in 1933. In February 1934 a coast-wide convention of ILA locals was held. Here emerged the two principal demands which led up to the 1934 waterfront strike—the jointly controlled hiring hall and a coast-wide contract. The strike began on May 9 and lasted until July 31, 1934. When, on July 3, the Industrial Association of San Francisco attempted to open the port with strikebreakers and the Governor of California called out the National Guard, the spectacular general strike of July 16-19 resulted.⁹

The 1934 strike was concluded by arbitration before the National Longshoremen's Board, appointed by the President. The award of

⁷ Robert C. Francis: *History of Labor on the San Francisco Water Front* (unpublished doctoral dissertation, University of California, Berkeley, 1934). See also Ira B. Cross: *History of the Labor Movement in California* (Berkeley, University of California Press, 1935).

⁸ A short-lived Federated Council of Wharf and Wave Unions was organized in 1888.—Cross, *op. cit.*, p. 198.

⁹ For accounts of the 1934 strike see Paul Eliel, *The Waterfront and General Strikes* (San Francisco, Hooper Printing Co., 1934); Paul S. Taylor and Norman Gold, *San Francisco and the General Strike* (in *Survey Graphic*, September 1934); and Dwight L. Palmer, *Pacific Coast Maritime Labor* (unpublished doctoral dissertation, Stanford University, 1935).

the Board established the basic contract which still governs the relations of the parties. The period from 1934 to the present has been by no means peaceful. In 1936 a major maritime strike occurred in which the longshoremen, through the Maritime Federation of the Pacific, joined other maritime groups in a walk-out lasting 97 days. The new union weathered this test of strength intact. In 1946 another coastwise strike occurred, lasting 6 weeks, this time under the auspices of the Committee for Maritime Unity. The period from 1934, even when no coast-wide strike was in progress, has at best been one of uneasy peace.

The West Coast longshoremen withdrew from the ILA in 1937 and affiliated with the CIO as the International Longshoremen's and Warehousemen's Union (ILWU). The "march inland" of the longshoremen has spread the influence of the union outside the water front itself into many other industries, including warehousing, cotton compressing, and flour milling, among others, particularly in San Francisco.¹⁰

Labor relations in the longshore industry on the Pacific Coast are governed by a single contract between the Waterfront Employers' Association of the Pacific Coast and the ILWU. The Waterfront Employers' Association is a well-organized association of employers which deals collectively with a number of shore-side crafts, the most important of which is the longshoremen. All longshoremen on the Pacific Coast, with the exception of those employed in Tacoma, Port Angeles, and Anacortes, who still belong to the ILA, are covered by the coast-wide contract.

Virtually all bargaining is on a coast-wide basis,¹¹ although the contract specifically provides for the settlement of port issues at the port level and makes provision for port arbitration of minor disputes. The clear tendency both in arbitration and in negotiation between the parties has been to regard an increasing number of issues as having coast-wide significance. There are few collective agreements which owe less to collective bargaining and more to arbitration than the agreement between the ILWU and the Waterfront Employers' Association.¹² Its major structure was laid down by the National Longshoremen's Board in 1934. More recently terms of new contracts have been arbitrated by the National War Labor Board and a Federal fact-finding panel. Few major contract clauses have been negotiated by the parties. During the life of the agreement disputes

¹⁰ The ILWU has also organized the sugar and pineapple plantation workers in the Hawaiian Islands and negotiated island-wide contracts. This is the first time plantation workers have been effectively organized in the Islands.

¹¹ Maritime Labor Board: Report to the President and to the Congress (Washington, 1940).

¹² Richard Allen Liebes: Longshore Labor Relations on the Pacific Coast, 1934-42 (unpublished doctoral dissertation, University of California, Berkeley, 1942).

are submitted to an arbitrator appointed by the Secretary of Labor when the parties are unable to settle them in negotiation.¹³

Three major and continuing sources of disagreement throughout the years have been (1) job control, (2) productivity, and (3) contract observance. Here the issue of job control is not principally one of decasualization. Decasualization has been the mutual concern of both the employers and the union.¹⁴ The Pacific Coast hiring hall system was, in fact, an employer introduction. The dispute has been, rather, whether longshoremen should be dispatched on a rotational basis, or whether employers have the right to order steady gangs. Controversy over whether a decline in productivity has resulted from the end of a "speed-up" or is evidence of a "slow-down" is a continuing one. The size of sling loads and the size and composition of gangs are recurring causes of disagreement. Contract observance has been a source of contention, looming most dramatically when the longshoremen have refused to cross picket lines or have struck to indicate their sympathy with, or opposition to, some national or international development (as illustrated by the refusal to load scrap iron for Japan.) The employers have insisted that any stoppage of work not provided for in the contract was a violation of contract and should be penalized. The union has from time to time maintained that there are grounds for refusing to work which the contract could not control.

The casual nature of the longshoreman's work and the hostility growing out of the bitter 1934 strike have, among other factors, made the development of mutually satisfactory relationships difficult to achieve.

MARITIME TRANSPORTATION

The maritime industry of the Pacific Coast has a long history of troubled relations. The first strike of seamen was in 1850 in San Francisco, in resistance to a wage cut.¹⁵ After an unsuccessful attempt in 1880, the first permanent union of unlicensed seamen was started in San Francisco in 1885 and later became the Sailors' Union of the Pacific (SUP), which has ever since been the leading organization of unlicensed personnel in the deck departments of West Coast ships.¹⁶ This union was for a long period the center of organizational activity

¹³ The arbitration is of the "quasi-judicial" type and owes much of its approach to Wayne L. Morse, now United States Senator from Oregon and formerly Coast Arbitrator. Mr. Morse has stated that an arbitrator "is bound by the record presented to him in the form of evidence and argument at the arbitration hearing. His job is the same as that performed by a State or Federal judge, called upon to decide a case between party litigants." (Proceedings, Third Annual Convention, International Longshoremen's and Warehousemen's Union, 1940, p. 261.) The Morse philosophy of arbitration has been widely accepted on the Pacific Coast.

¹⁴ M. Keller: *Decasualization of Longshore Work in San Francisco* (National Research Project, Works Progress Administration, 1939).

¹⁵ Cross, *op. cit.*, p. 16.

¹⁶ Paul S. Taylor: *The Sailors' Union of the Pacific* (New York, the Ronald Press, 1923).

in the Pacific Coast ports. The Marine Firemen were organized in 1886 and the Cooks and Stewards in their present organization in 1894. Both of these have been limited in their activities to the West Coast. Licensed personnel was organized about the same time by the Masters, Mates, and Pilots', and by the Marine Engineers' Beneficial Association, both of East Coast origin.

The first written collective agreement for unlicensed personnel was signed by the SUP in 1902 and continued until 1921. Agreements also were signed by the Marine Cooks and Stewards and the Marine Firemen. These agreements were with the Ship Owners' Association. In 1921 an unsuccessful strike was called to resist a wage cut, and collective bargaining virtually disappeared until 1933. The SUP, during much of this period, was torn by an internal struggle between the leadership and IWW followers.¹⁷

A great revival of union activity came in 1933. The waterfront strikes of 1934 and 1936 resulted. Maritime workers on the Coast are now almost completely organized. The two principal organizations of licensed personnel continue to be the National Organization of Masters, Mates, and Pilots of America (AFL) and the National Marine Engineers' Beneficial Association (CIO). Unlicensed personnel belong to three primarily West Coast unions: Sailors' Union of the Pacific (AFL), Marine Cooks' and Stewards' Association of the Pacific Coast (CIO), and the Marine Firemen, Oilers, Water-tenders, and Wipers Association of the Pacific Coast (Independent).

Repeated efforts have been made to federate the several crafts. The Wharf and Wave Council in 1888 and the City Front Labor Council in San Francisco from 1891 to 1906 were the first associations attempted.¹⁸ The International Seamen's Union, organized by the SUP in 1892, affiliated the major West Coast crafts, along with fishermen's unions and inland boatmen, until the establishment of the CIO, in 1935, led the Cooks and Stewards, the Inland Boatmen's Union, and the Marine Firemen to break off. It was replaced by the Seafarers' International Union of North America (AFL) in 1938, which finds its chief strength in the SUP. Following the 1934 strike, the Maritime Federation of the Pacific united the Pacific Coast crafts, including the SUP, which later withdrew (1938) in a bitter controversy with the longshoremen. The Federation disappeared during the early years of the war. In 1946 a national confederation of maritime unions was formed at a convention in San Francisco, Calif.—the Committee for Maritime Unity. After coordinating the strike in the fall of 1946, the Committee ceased to function, owing to internal friction.

¹⁷ John S. Gamba: *The Decline of the IWW* (New York, Columbia University Press, 1932), ch. 5.

¹⁸ Cross, *op. cit.*, pp. 198 and 207.

Factionalism has been rife throughout the history of maritime unionism in Pacific ports. Differing union ideologies, the rivalry of aggressive leaders, the sense of craft identification, and conflicts over work jurisdiction have abetted the factional bitterness. The longest continuing jurisdictional fight has been between the sailors and the longshoremen, and dates back at least to 1902.¹⁹ Rivalry between the AFL and CIO has served to increase the historic factionalism.

Throughout the history of the industry, the employers have generally been more cohesively organized than the workers. Their organizations have been stronger and more stable, and predicated on a wider base than those of the employees during most of the past half century. They have not had the dissension so evident on the union side. The Pacific American Shipowners' Association now represents employers in the offshore, intercoastal, and Alaska trades and negotiates and administers collective agreements. The Shipowners of the Pacific Coast is a similar organization of coast wise operators, but since coastwise shipping is now of minor importance, it is the less influential of the two associations.

Coast-wide master agreements are signed with the several unions. Industry-wide bargaining, when bargaining has been undertaken at all, has been the standard practice since 1902. Arbitration has not been so widely used in administering these agreements as in the longshore industry. The parties have relied on negotiation and direct action to settle their disputes, and have rarely used arbitration.

Two of the major sources of controversy over the years have related to (1) working conditions and (2) control of hiring. The nature of the industry occasions an unusual number of disputes over working conditions:

The work done and the kind of life lived by maritime workers are essentially different from that of workers in other occupations * * * Unlike other workers, when a seaman sells his labor he virtually sells himself, temporarily. Of necessity he lives on the ship. There is no possibility of changing his place of work or his occupation, whether or not conditions are satisfactory, until he reaches a safe port. While he is at sea and to a less extent ashore, the seaman is restricted in matters which other workers consider definitely personal, such as food, living quarters, associates, and recreation.²⁰

Living conditions aboard ship, consequently, have come to be elaborately regulated, including the quality of meals, the color of pillow cases, and the frequency with which clean towels are supplied. A multitude of "working rules," in the absence of standardized work, establish the duties and compensation of the various members of the crews. The unions consider them necessary to protect seamen against the autocratic rule of the master of the ship; employers tend to regard them as "featherbedding."

¹⁹ Cross, *op. cit.*, p. 247.

²⁰ Maritime Labor Board: Report to the President and to the Congress (1940).

Control of hiring is of unusual importance because of the constant turn-over of personnel. The hiring machinery governs access to jobs and the selection of employees. On the Pacific Coast the unions control the hiring of unlicensed personnel through their own hiring halls. Licensed personnel is, however, selected by the employers. The strike of 1946 was in large part over the method of selection of licensed employees. Control remained in the hands of the employers.

The role of the Government has been unusually prominent. During both wars, the Government has operated the bulk of merchant vessels on its own account; and even in peacetime, labor-management stability in the maritime industry is a prime objective of national policy. The Government regulates conditions aboard ship, and either sets the rates or subsidizes most of the merchant marine. Among the Federal agencies engaged in mediation, arbitration, and regulation of maritime labor have been the United States Shipping Board (1917 to 1933), the United States Maritime Commission (1936 to date), the Maritime Labor Board (1938 to 1940), and the War Shipping Administration and the War Shipping Panel of the National War Labor Board (during World War II). More recently, the Department of Labor has sought to continue the equalization of wages and other conditions between the two coasts, begun by the War Labor Board, by appointing in 1946 and again in 1947 a single arbitrator to hear cases on both the East and West Coasts. The balance among the unions in their contract levels is so delicate that it is easily upset.

The bitterness and reluctance to compromise, which have been characteristic of maritime labor relations, result from a number of circumstances. Until fairly recently, the employment relation was that of master and servant. The employees have been without the stabilizing influence of a continuing community life. Shipboard living conditions encourage unrest and a sense of grievance. The offshore merchant marine has been faced with rigorous foreign competition, and, unlike most manufacturing industries, has enjoyed no particular productive superiority. In the interest of more stable relations, adaptation of the provisions of the Railway Labor Act of 1926 to the maritime industry have on occasion been suggested.²¹

FISHING

The fishermen of the Pacific Coast are quite generally unionized. Contrary to practice elsewhere in the United States, these unions bargain over the price of fish. This has given rise to a civil suit filed by the Antitrust Division of the U. S. Department of Justice charging the major union in the field—the International Fishermen and Allied Workers of America (CIO)—with restraint of trade in

²¹ Maritime Labor Board, *op. cit.*, ch. 3.

violation of the Sherman Act.²² In an earlier case, involving the Columbia River Area, the U. S. Supreme Court held that the members of the Pacific Coast Fishermen's Union were independent entrepreneurs.²³ The unions have contended that their members are workers bargaining over their wages. The outcome of the current case will determine whether organized fishermen can carry on collective bargaining over fish prices and other terms with canneries or fresh fish dealers individually or collectively. The decision of the Supreme Court will greatly affect the sphere and existence of unionization in this segment of the economy.

The first recorded union among fishermen on the West Coast was organized in San Francisco in 1864. The Italian Fishermen struck and later organized a cooperative sales society when white dealers drove out Chinese peddlers and lowered fish prices.²⁴ Unions of fishermen in the city were reported again in 1882-83 and 1889.²⁵ The first continuing union was the Columbia River Fishermen's Union, formed at Astoria, Oreg., in 1886 and affiliated shortly thereafter with the AFL. Following a strike in 1896, it started a cooperative cannery, which still operates. It was reorganized in 1933 as the Columbia River Fishermens' Protective Association and extended its membership throughout the Columbia River district.

The initial organization in Alaska took place in Bristol Bay in 1902 following a strike. Fishermen were sailing out of San Francisco and Seattle to this rich salmon fishing area and selling the fish to the canneries. The Fishermen's Protective Union of the Pacific Coast and Alaska was formed; it continues today under the name of the Alaska Fishermen's Union.²⁶ Sometime later the Copper River and Prince William Sound Fishermen's Union was established; it also is still in existence. Other unions were started from time to time in other fishing districts of the coast. The International Seamen's Union (AFL) affiliated them in a loose way, each local union retaining its own autonomy. Some of the local unions remained independent even of this loose federation.

The ISU established the Pacific Coast Fishermen's Union in 1932, which covered most districts except those of the Columbia River. The Salmon Purse Seiners' Union of the Pacific was organized in the Puget Sound area in 1935, and the Deep Sea and Purse Seiner Fishermen's Union of California in 1936. Both affiliated with the ISU. The Fishing and Cannery Workers' Industrial Union, which had been

²² California CIO Council, Research Department: *The Fisheries of California* (San Francisco, 1947) p. 1.

²³ *Columbia River Packers' Association, v. Hinton*, 315 U. S. 1 (M) (1943), 76 Law Ed. 750 (1942).

²⁴ Cross, *op. cit.*, p. 36.

²⁵ *Idem*, pp. 198 and 315.

²⁶ Homer E. Gregory: *North Pacific Fisheries* (New York American Council, Institute of Pacific Relations, 1939).

a dual union outside of the AFL, disbanded in 1936 at the same time as its parent association, the Trade-Union Unity League.

In 1936, a convention of fishermen's locals affiliated with the ISU was held in Seattle. A loose confederation, comprising six of the major district associations, including the Alaska Fishermen's Union, was formed and called the Federated Fishermen's Council of the Pacific Coast. This federation joined the CIO in 1937 as the International Fishermen and Allied Workers of America (IFAWA). Additional associations joined in 1938 and 1939, and IFAWA is now the dominant union on the Coast.²⁷ Independent unions and associations and locals affiliated with the ISU still exist in Alaska, Puget Sound, and California, but approximately three out of every four organized fishermen now belong to IFAWA. The constituent locals, however, still retain great local autonomy. Each district has its own problems, and there are seven districts in California alone. Each type of fish requires different gear and handling. Some of the major types of fish are tuna, sardines, mackerel, salmon, crab, shark, smelt, sole, abalone, and halibut. The markets are local, and the general tradition is toward cohesion more by district and type of catch than toward strong coast-wide federation.

The purchasers of fish—the canneries and fresh fish dealers—have also combined. In California, fresh fish dealers in southern California are represented by the Western Sea Foods Institute, and in northern California by the Northern California Fisheries' Association. Fish cannery have 4 associations. The 9 major Columbia River packing companies deal jointly with the Columbia River Fishermen's Protective Union, now affiliated with IFAWA. The Puget Sound Salmon Cannery, Inc., and the Alaska Salmon Industry, Inc., unite cannery in their respective districts for collective bargaining purposes. The latter association signs contracts with 13 unions, several of them affiliated with IFAWA. A number of other associations of cannery and fish dealers operate on the Coast.

Some of the contracts are signed on an individual company-by-company basis; other contracts are identical for the whole industry in the area but are separately signed for fear of antitrust prosecutions; and still other contracts are signed by an association of cannery or dealers, as in northern California and Alaska, for all of their members. Collective bargaining can be unusually complicated. In the Alaska salmon industry, for example, negotiations cover a wide range of subjects not found in the normal contract: Allowances for board and lodging while away from home, the type of quarters on ship while

²⁷ Workers in the fish canneries have also been organized by IFAWA or its affiliates. Contracts are now on a local basis, but a coastwise contract has recently been suggested as a union aim. Other canneries, such as some in the Puget Sound Area, are organized by the AFL, and still others by the Food and Tobacco, Agricultural and Allied Workers (CIO).

being transported to Alaska, the price at which gear will be sold, the prices for various sizes and types of fish, "run money," "lay money," "waiting time," seasonal guaranties, and the adequacy of culinary service. The nature of the industry gives rise to issues not normally found in collective bargaining. All contracts are by district, such as the Northern California Fish Stabilization Agreement covering the sale of fresh fish.

The fishing industry is highly seasonal, and negotiations at times are on a "crisis" basis. Considerable risk is taken by both the buyers and sellers of the fish.

Collective bargaining, much of it on a multiemployer basis by districts, is now the standard practice in the fishing industry on the Pacific Coast.

LUMBER

A large part of the lumber commercially produced in the United States comes from the Pacific Northwest. In 1940 employment in the lumber and lumber products industry constituted half of all manufacturing employment in Washington and Oregon combined. Fir and pine are the two most important types of lumber produced in the Northwest. California has a much smaller lumber industry specializing in redwood. The chief area competitive with the Pacific Northwest is the South, where the degree of unionization and wages are at far lower levels.

The lumber industry moved to the Northwest in the last quarter of the nineteenth century. The workers were typically single men, "homeless, womanless, and voteless." The earliest unions were among the shingle weavers, who constituted a relatively skilled craft.²⁸ They first organized in the 1890's. The initial efforts of the AFL to organize in the camps and sawmills during the same decade were abortive. The IWW entered the industry in 1905. Its program of aggressive action designed to achieve immediate results gained many supporters. The AFL organized unions including sawmill and timber workers in 1905, and again in 1913 and 1916.

The AFL and IWW both called strikes in July 1917 for higher wages, shorter hours, union recognition, and better conditions. The strikes were lost. Production, however, fell off, partly as a result of sabotage, and the Federal Government became concerned because of the need for lumber during the war. The Loyal Legion of Loggers and Lumbermen (the 4L) was formed with War Department support. Conditions were greatly improved, chiefly through Federal intervention in behalf of increased output. The 8-hour day—the chief demand of the strikers—was granted. The 4L was never accepted as a bona fide union, however, and declined after the end of hostilities

²⁸ Vernon H. Jensen: *Lumber and Labor* (New York, Farrar & Rinehart, 1945), p. 117.

and the withdrawal of Government support, and in the face of AFL and IWW condemnation.

Employers in the lumber industry first organized in 1891.²⁰ The strongest of the early associations was the Lumbermen's Protective League, which functioned during World War I. The employers were completely opposed to unionization, and effective collective bargaining therefore never occurred on any scale. The strong feelings in the Northwest about unionization and union efforts culminated in the Everett and Centralia skirmishes between unionists and nonunionists in 1916 and 1919. Seven men were killed and 50 wounded in the first encounter, and four men killed and a number wounded in the second.

Union activity was at a low ebb during the 1920's. The collapse of the building boom, after a recession beginning in 1926, caused a great reduction in employment. This was followed by the Nationwide depression beginning in 1929. The industry started to revive, in 1933 and, with it, union activity. The National Recovery Act established a Lumber Code Authority, but it was never very effective, partly because of the differences in conditions between the South and the Pacific Northwest. Stimulus was given to organizational activity, however, which resulted in the formation of a Council of AFL locals, which represented both the sawmill and logging branches of the industry.

In 1935 the AFL Executive Board gave jurisdiction over the lumber industry to the United Brotherhood of Carpenters and Joiners of America. Under its leadership, demands for a closed shop, wage increases, shorter hours, and other conditions of employment were made. The industry-wide strike of 1935 resulted, and collective bargaining became established for the first time on a permanent basis. Settlements, however, were made with individual companies, and in succeeding years the drive toward standardization among employers and districts was a major source of disputes. Unity within the union's ranks, however, was not achieved, and in 1936 a separate union was formed, which in 1937 affiliated with the CIO as the International Woodworkers of America. The CIO has had its chief strength in the logging camps, and the AFL in the mills.

Continual disputes occurred after 1935, growing out of the long history of ill feeling between employers and the unions, the heterogeneity in contract provisions, and the rivalry between the two unions. Collective agreements were signed covering increasingly large segments of the industry, the most inclusive agreement being in the fir district with the Lumbermen's Industrial Relations Committee. District-wide collective bargaining has not yet been replaced by single

²⁰ Jenson, *op cit.*, p. 115.

industry-wide agreements, although company-by-company bargaining is of constantly decreasing significance. During World War II, union rivalry and manpower shortages, arising in part from the exodus to the ship yards and aircraft factories, directed great attention to wage rates. A wage study was first undertaken by Dexter M. Keezer, then president of Reed College, for the Council of National Defense.³⁰ Subsequently the National War Labor Board created a lumber commission, partly to assure uniformity of treatment in across-the-board increases and greater standardization of individual job rates. Maintenance-of-membership was introduced into the industry by the National Defense Mediation Board, the predecessor of the War Labor Board, in the Snoqualmie Falls case.

Following the conclusion of World War II, an important strike occurred during the "first round" of wage increases, but the "second round" was settled through peaceful collective bargaining. The common labor rate in the industry is now one of the highest in the United States. It is the key wage rate in the Pacific Northwest, and influences directly the rates in such diverse industries as pulp and paper manufacturing and casket making.

The turbulent history of industrial relations in the lumber industry of the Pacific Northwest is indicated by the fact that "although employing less than 10 percent of the gainfully occupied population, the lumber industry accounted for over half of the days of idleness from strikes in Washington and Oregon between 1927 and 1940, and accounted for over two-thirds of the employee complaint charges filed in those States with the National Labor Relations Board from 1935 to 1940."³¹ The historical employer opposition to unionism, the traditional floating nature of much of the labor force, and the rivalry, first between the IWW and AFL and later between the AFL and the CIO, in part explains the extent of industrial strife.

PULP AND PAPER

The most rapidly expanding and prosperous segment of the pulp and paper industry is located in the Pacific Northwest. The great growth of the industry in this area has occurred in the past 15 years. In 1940, it ranked as the fourth largest employer among the manufacturing industries of Oregon and Washington. The high quality of the raw material, plentiful hydroelectric power, low-cost water transportation, and high output per man-hour have given the region a considerable competitive advantage over other sections of the country.

Unionization was first attempted in the industry during World War I.³² Unsuccessful strikes were called in 1918 and 1919, and all

³⁰ D. M. Keezer: *The Douglas Fir Lumber Industry* (Advisory Commission to the Council of National Defense, Washington, D. C., 1941).

³¹ Richard A. Lester: *Economics of Labor* (New York, MacMillan Co., 1941), p. 765.

³² Roger Randall: *Labor Relations in the Pulp and Paper Industry of the Pacific Northwest* (Portland, Oreg., Northwest Regional Council, 1942), p. 29.

union efforts collapsed during that postwar period. The industry prospered during the 1920's, wages were relatively high, the workers enjoyed a fairly large measure of security, and the national "climate" was not conducive to trade-union activity. Paper consumption is responsive to cyclical economic changes; during the depression years of 1930-32, two wage cuts were instituted and working time reduced. In 1933, with the advent of the NRA, a spontaneous organizational movement got under way. The local organizations shortly thereafter affiliated with the two established AFL international unions in this field—the International Brotherhood of Paper Makers and the International Brotherhood of Pulp, Sulphite, and Paper Mill Workers of the United States and Canada. The former has its jurisdiction in paper manufacturing, and the latter mainly in the pulp mills. These two unions now include virtually all the workers subject to their jurisdiction in the three West Coast States.

In 1934, the two unions approached a group of employers and after only 3 days of bargaining negotiated an agreement covering half of the industry. Nearly every year since, the contract has been reopened for liberalization of wages and working conditions. In 1936, the unions obtained maintenance of membership. No strike or lockout has ever occurred. Wages are the highest in the industry in the United States.

In recent years, a single agreement has been negotiated covering the entire industry (with a few minor exceptions) on the Pacific Coast. The two unions formed the Pacific Coast Pulp and Paper Mill Employees' Association to conduct joint negotiations with the employers. The operators are united in the Pacific Coast Pulp and Paper Manufacturers' Association, organized in 1934 for negotiating purposes at the suggestion of the officials of the international unions.³³ This association from the start adopted the policy of full acceptance of collective bargaining. Consequently there was no initial period of strife, which in other industries has left a residue of lasting bitterness and mutual suspicion. Only one "unfair labor practice" case was filed under the National Recovery Act, and none under the National Labor Relations Act.

The parties have developed an interesting technique for their industry-wide negotiations. An annual conference is held, with the chairmanship rotating from year to year between representatives of the employer and the union groups. While the actual bargaining is conducted by a small number of people, the negotiations are carried on in "gold fish bowl" surroundings. Great care is taken to assure adequate representation of all interests. The conference is well attended by representatives of both sides, and observers are welcome and numerous.

³³ Collective Bargaining in the West Coast Paper Industry (Industrial Relations Section, Princeton University, Princeton, N. J., 1938).

Grievance procedure has been carefully developed. Four steps are provided, the final one being arbitration.³⁴ Few cases, however, have ever gone to the joint arbitration board. Job evaluation has been conducted on a joint basis since 1934. A joint job analysis committee began an industry-wide study of classifications and rates, which resulted in a uniform rate for all unskilled labor, regardless of district, and greater standardization in job rates above common labor. Several thousand individual rates have been reviewed. A permanent classifications committee issues interpretations of wage provisions of the agreement and relieves the grievance machinery of part of its normal load.

The two most unstabilizing factors in the industry have been the varying profit position of the several companies and the threat of rival unionism. The different mills turn out different products and their mechanical equipment ranges from the very modern to the nearly obsolete. Consequently, in any one year their capacities to pay increased wages may be and have been quite diverse. This situation sets up internal conflicts within the employer and the union organizations. The second threat to stability has come from inter-union rivalry. The International Woodworkers of America (CIO) has, on occasion, made efforts to win over individual locals of the two AFL unions. It has been successful in some communities where lumbering is also important, but has never been able to secure control of a sufficient number of locals to be able to obtain representation rights. The National Labor Relations Board has ruled the industry-wide unit the appropriate one for collective bargaining purposes. The parties have been careful not to let wages in the lumber industry surpass those in pulp and paper. Industry-wide bargaining has insured greater security against rival unionism, and thus greater stability in industrial relations, than would have occurred under plant-by-plant bargaining.

This industry made remarkably rapid, in fact almost instantaneous, progress into mature bargaining on an industry-wide basis with a minimum of friction. The parties have both been satisfied with the master agreement type of bargaining. "For both the employers and the unions coast-wide bargaining has simplified negotiations, increased understanding through joint activities, and provided stable relations."³⁵ The standardization of wages and conditions has removed a source of unrest, and the magnitude of a strike or lock-out has caused the parties to weigh carefully the advantages of such action as against the costs.

³⁴ R. P. Wallenberg and E. W. Cooper: *Labor in the Pacific Coast Paper Industry* (in *Harvard Business Review*, Boston, Spring 1938).

³⁵ Richard A. Lester and Edward A. Robie: *Wages Under National and Regional Collective Bargaining* (Industrial Relations Section, Princeton University, Princeton, N. J., 1946) p. 88.

The sources of the good relations existing in the pulp and paper industry are of some interest in an area where the major industry has been marked by an opposite experience. The pulp and paper industry in the Northwest has been prosperous and expanding. This has permitted relatively high wages and secure employment. The employees have been stable members of the work force. Many of them are skilled, and investment per worker is high. Consequently, the employer needs to be particularly concerned with their attitude toward their work. Unionization came into this relatively youthful industry when national policy encouraged union recognition. The largest employer in the industry was noted for a liberal policy toward the employees and toward unionization. The parent international unions were long-established and responsible organizations. The unions were immediately given a sense of institutional security which allowed them to become concerned at least as much with the problems of the industry as with their own survival. The result has been a record of joint relations unmarred by those conflicts which have so harassed certain other West Coast industries.

MOTION-PICTURE PRODUCTION

Motion-picture production is one of the most highly concentrated industries in the United States. It is almost completely localized in Southern California. With 30,000 employees, it is among the State's leading industries, requiring a large investment in plant and equipment and demanding many and varied talents and skills.

Trade-union organizational activity first began in 1916. The AFL at that time undertook a major but unsuccessful campaign to organize the industry. The International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada entered the industry in 1918. The Alliance had a firm base in the theaters of the Nation and has always held the power to withdraw the projectionists from the motion picture houses. This has been a potent bargaining weapon. The Alliance sought to become a quasi-industrial union, accepting employees with a wide variety of skills into its ranks, including carpenters, painters, and electricians. The building-trades unions from the start were never satisfied to relinquish jurisdiction to the Alliance and organized simultaneously. The Alliance and the principal craft unions, in the face of opposition from the studios, finally formed a united front and in 1926 negotiated the Basic Studio Agreement. This agreement is still the standard contract, although there have been changes in the signatory unions and companies.

The Alliance and the craft unions continued the truce in their warfare following 1926 for a number of years, but jurisdictional

questions kept arising. Owing partly to criminal charges against two rival leaders and to continuing jurisdictional controversies, the major craft unions in 1941 formed the Conference of Studio Unions. Internecine warfare has continued ever since, and reached a peak in 1945, when a jurisdictional conflict over a small number of workers precipitated a prolonged and violent strike.

The Actors Equity Association entered Hollywood in the 1920's. It was opposed by the Academy of Motion Picture Arts and Sciences, which had an employee-representation plan devised to promote better relations between the studios and such highly skilled groups as the directors, writers, actors and technicians. The Academy became the dominant group. In 1933, however, it recommended the acceptance of a drastic salary reduction and, confronted with widespread suspicion of producer domination, lost prestige and membership rapidly, finally continuing only with technical research and allocation of awards.

The NRA brought a great upsurge in union activity. The industry became almost completely organized. Murray Ross wrote in 1941: "Hollywood is a union town."³⁶ The employees are organized into 43 different crafts, most of them affiliated with the AFL.³⁷ They may be divided into four major groups: (1) the Alliance, (2) the Conference of Studio Unions, (3) the talent guilds, and (4) the unions of white-collar workers. The Alliance has 10,000 members; the Conference, 7,000. The Screen Actors Guild is the most prominent of the talent guilds. In few, if any, other industries are white-collar, professional and technical, and managerial employees so completely unionized.

The employers are also quite thoroughly organized. There are three groups of producers, each of which carries on labor negotiations separately. The 10 major studios are members of the Association of Motion Picture Producers, 25 large independents belong to the Society of Independent Motion Picture Producers, and the third group which includes 32 smaller independent companies forms the Independent Motion Picture Producers Association. The first of these associations, because of the dominating size and importance of its member companies, is the contract leader for the industry.

An unusual institution is the Central Casting Corporation, an employment office set up in 1925, as a result of an investigation by the Russell Sage Foundation, to hire minor actors and "extras." Much progress has been achieved in reducing turn-over and eliminating hiring abuses which formerly prevailed. This operation is now one of the largest and most efficient placement bureaus in the Nation.

³⁶ Murray Ross: *Stars and Strikes* (New York, Columbia University Press, 1941), p. 3.

³⁷ *More Trouble in Paradise* (*in* *Fortune*, November 1946).

Excessive jurisdictional subdivisions seem to have increased unnecessarily the manpower requirements of the industry. The industry has been a profitable one and wages have been comparatively high; consequently the most difficult disputes have not been over wages.

AIRCRAFT

Aircraft production during the war period mushroomed into one of the leading industries on the Pacific Coast. In Washington it ranked third, following lumber and shipbuilding, and in California, first in volume of employment. Since the war's end it has shrunk drastically, but remains an important industry, several times expanded over prewar levels. Airframe production is centralized in the Seattle and southern California areas. Only one major company operates in Washington, which during the war had plants in Seattle and half a dozen neighboring towns. In southern California, two of the major companies are located in San Diego, and the four others in the Los Angeles area.

The first union organization in the industry took place at the Boeing plant in Seattle. In 1933 a group of workers obtained a federal local charter from the AFL.³⁸ This charter designated the Boeing organization as Aeronautical Workers' Industrial Union, Local 18886. In 1934 the American Federation of Labor gave the International Association of Machinists (IAM) jurisdiction over all aircraft workers, and in October 1935, the Boeing group affiliated with the IAM. The first contract was signed in 1936. The union obtained the highest hiring-in rate in the industry. Generally the Boeing contract has remained the most favorable in the Nation. It has consistently provided the highest level of wages. It also provides for a union shop and has a strict seniority clause.

Wages have been the major source of dispute between the Boeing Aircraft Co. and the IAM. Seattle is the highest wage area of any in which major airframe firms are located, and the most strongly unionized. The relatively high wages in the shipyard and lumber industries, among others, set the pace for aircraft. At the same time, the high percentage of women and the competition from lower wage areas, in an industry where labor is a high percentage of total cost, have exercised a downward pressure. The wage controversy reached its peak during World War II, when the manpower situation was particularly acute in the Seattle area. A special wage increase was granted at Boeing by the National War Labor Board to aid the effective prosecution of the war. Except for a short period of internal conflict within the union shortly before the United States' entry into the war, industrial relations generally have been conducted in a

³⁸ Seattle Times, July 27, 1941.

peaceful way. Arbitration is used to settle disputes during the life of the contract when the parties fail to agree.

In southern California, the IAM obtained its first contract in 1937. It chartered industrial locals which admitted to membership all production workers, irrespective of completion of an apprenticeship. The United Automobile Workers (UAW—CIO) also secured its first contract in 1937 but allowed it to lapse in 1938. With the stepping up of airplane production in 1939, the UAW renewed its organizing activities. Its jurisdiction was specifically amended to cover aircraft workers. An organizational battle was begun between the IAM and UAW which has continued intermittently ever since. It was most intense during the early war years. Of the two organizations, the IAM appears to have a $2\frac{1}{2}$ to 1 superiority in membership. A third union, the National Union of Aircraft Welders—never affiliated with either the AFL or CIO—has represented the welders at several southern California plants. Wages have been the major source of controversy with the employers, just as in Seattle, but the California problem never was as acute.

The industry is best known in the industrial relations field for its work on job evaluation. The prewar internal wage structure has been described as "chaotic." The U. S. Bureau of Labor Statistics, at the request of the Office of Production Management,³⁹ in the fall of 1941 made a study of wage rates in California airframe companies which confirmed this designation.⁴⁰ The expansion of the industry, the increasing division of labor, the introduction of new processes and new machinery, the tremendous variety of tasks involved in building an airplane, wage competition among the companies, and the influx of thousands of new workers created a welter of illogical job and personal rates.

Efforts were made to reduce the chaos created by the phenomenal growth of the industry with the advent of war. The Aircraft Production Council was established to coordinate manpower and production practices. An employment center was developed for the central registering of applicants and hiring of employees. The Southern California Aircraft Industry (SCAI) in 1941, realizing the need for stabilizing wages, established a working committee to study the problem and recommend a solution. The committee decided that an industry-wide job evaluation plan was necessary "to provide a definite control in the establishment of hiring rates and job pay ranges in the various plants of the aircraft industry."⁴¹ A plan, known as the

³⁹ Later, the War Production Board.

⁴⁰ U. S. Bureau of Labor Statistics: *Wage Rates in the California Airframe Industry, 1941* (Bulletin No. 704, 1942).

⁴¹ Southern California Aircraft Industry: *Job Evaluation Plan* (November 1941).

"SCAI plan,"⁴² was worked out for the industry and was approved by the National War Labor Board.

The plan called for the establishment of labor grades and the determination of the proper grade for individual jobs through factor comparison. Points were assigned to each degree of each factor, and the total points established the grade for the job. The system was heavily weighted in favor of skill as compared with hazards and job conditions. While the unions did not help devise the system, they did help administer it. A similar plan was subsequently introduced at Boeing. The National War Labor Board created the West Coast Aircraft Committee to adjudicate disputes which arose in the application of the plan to individual jobs and problems. The job evaluation system was completely established and reviewed at Boeing by the end of the war, but the joint review was less than half completed in southern California.

The SCAI plan was spread to most of the airframe industry throughout the United States.⁴³ It has formed the basis for job evaluation plans in many other companies and industries and is one of the best known job evaluation systems. In 1947, it is undergoing major review, however, both at Boeing and in southern California.

The industry, despite its tremendous readjustments to postwar levels, has made the transition with a minimum of industrial-relations strife. It has never experienced the bitter struggles which have marked certain other industries on the coast. Collective bargaining is relatively recent in origin and has been largely carried on under Government encouragement and control through the National Labor Relations Board and the National War Labor Board. These agencies settled controversies which might otherwise have found more violent solutions.

TEAMSTERS

The Teamsters' Union⁴⁴ is a particularly powerful and influential organization on the Pacific Coast. It has spread into many fields outside of truck transportation. Its uniform pattern of bargaining is with organized employers, and the standard contract is a master agreement covering all the employers in the industry in the area. The Teamsters' Union deals with no single large industry, but with a large number of relatively small industries—baking, taxi service, dairy products, cold storage warehousing, for example—each with its own contracts and industrial relations history.

⁴² Robert Gray: *Job Evaluation in the Southern California Airframe Industry* (Pasadena, California Institute of Technology, 1943).

⁴³ *Yearbook of American Labor* (New York, Philosophical Library, 1945), vol. I, pp. 266-277.

⁴⁴ International Brotherhood of Teamsters, Chaffeurs, Warehousemen, and Helpers of America (AFL).

The first joint action by teamsters occurred in San Francisco in July 1850. Local teamsters organized to resist the encroachment of Australians in the drayage business.⁴⁵ They organized intermittently, but temporarily, for the next half century. The first permanent organization came about 1900. Following an unsuccessful strike in 1901, contract negotiations were again undertaken in 1902, and an agreement concluded with the Draymen's Association. This is the oldest continuing contract in the city. Shortly thereafter the milk wagon and laundry wagon drivers and other teaming crafts began to organize and establish contractual relationships.

In Seattle, which is now the headquarters for the union in 11 Western States, the first organization came in 1899 and lasted until 1907.⁴⁶ It was revived in 1909, and a joint council established in 1910. The great expansion in the influence of the union came after 1925, however, and particularly after 1933. It now has 20,000 to 30,000 members in the Seattle area.

Unionization in Portland and Los Angeles came more slowly than in San Francisco and Seattle, and the latter two cities still remain the principal bases of the union on the Coast. Organization in Portland and Los Angeles came partly through persuading chain enterprises to accept the union in these new areas once it was recognized in Seattle and San Francisco. The Western Conference of Teamsters unites the teamsters' locals in 11 Western States. Joint councils have been established in each major area in the region.

The Teamsters' Union has become a heterogeneous organization. It has not confined itself to the teaming crafts, nor is it confined to any one industry. It has become a "general union," by organizing many skills in many industries and wherever its influence through control of truck transportation might lead it or permit it to go. Its locals, in various areas, cover the following types of workers, among others: All types of drivers, auto salesmen, brewery workers, warehousemen, fresh fish handlers, packing shed workers, garage mechanics, filling station operators, office employees, taxi drivers, inside workers in dairies, cannery workers, employees of can manufacturing companies, wire rope factories, burlap bag plants, and mayonnaise and potato chip producers, poultry handlers, embalmers, and wholesale opticians. The union has "satellite" organizations which it strongly supports and influences, including in some cities the department store clerks, the grocery clerks, the laundry workers, and even the musicians and beauticians. The sphere of influence of the union is most widespread in the State of Washington. It has lent its

⁴⁵ Cross, *op. cit.*, p. 15.

⁴⁶ Carl Gustaf Westine: *The Seattle Teamsters* (unpublished thesis, University of Washington, Seattle, 1937), p. 1.

strength to groups which by themselves do not have as much power as derives from the control of truck operations.

The expansion of the Teamsters' Union has met resistance, not only from employers, but from other unions. The Brewery Workers in the Northwest strenuously resisted the inroads of the Teamsters, but finally lost. The Teamsters have also come up against the Longshoremen's Union, which likewise has not confined itself to its original jurisdiction. The "march inland" by the latter was matched by a "march to the sea" by the former. The warehousemen in the port cities of the Coast have been organized by both groups, and the lines of demarcation are tightly drawn. In San Francisco, the Longshoremen have organized the majority of the warehousemen, and the Teamsters in the other major ports.

The most recent conflict has been in the fruit and vegetable canning industry. The canneries in the Pacific Northwest were almost exclusively organized by the AFL, originally, and jurisdiction was assigned to the Teamsters in 1945. The AFL conducted a strong organizing campaign in the large-scale canning industry of northern California in 1937, which was supported by the Teamsters' Union. The AFL signed an agreement in 1937 with the California Processors and Growers, representing most of the major canneries. The United Cannery, Agricultural, Packing, and Allied Workers of America (UCAPAWA—CIO) filed charges of company domination of the AFL locals with the National Labor Relations Board, but no action was taken. The UCAPAWA was replaced by the CIO Food, Tobacco, Agricultural, and Allied Workers Union of America (FTA). When the Teamsters were given jurisdiction over the cannery workers in 1945, this CIO union conducted an organizing drive in the industry. The first National Labor Relations Board election in 1945 was declared invalid. A second election in 1946 was won by the Teamsters, subject to the recounting or rejection of a large number of challenged votes. Final determination has not been made, but the Teamsters have possession of the contract with the California Processors and Growers. Some of the independent canneries have been organized by the FTA.

In almost every case the Teamsters sign contracts with organized employers: The Bakers' Bureau of Seattle, the Associated Producers and Packers of Washington, the Garage Owners' Association, the Milk Dealers' Association, the Taxi Operators' Association, and the Truck Owners Association, to name only a few. Most of these associations, and the resulting contracts, cover a single city, or in the case of the canning industry, a producing region. The standard contract calls for the closed shop. Many of the Teamsters' strikes have been for this objective. Once it is granted few strikes occur, and the union follows a policy of strict contract observance. The union and the

individual employers' association sometimes seek to "stabilize" the industry. "In essence, it represents an arrangement whereby the union and the employers' associations cooperate to pay high wages, to charge 'standard' prices, and to restrain or regulate competition."⁴⁷ The union examines the ability of the employers to pay as an important consideration in its wage policy.

The Teamsters' Union has organized primarily in local market industries where external competition is nonexistent or not severe and contractual arrangements directed toward the local situation can be worked out. Its membership is composed of settled local residents with steady jobs, as compared with the more floating labor force of the lumber, longshore, and maritime industries. It has emerged as a leading example of "business unionism."

Multiple-Employer Bargaining in San Francisco

Multiple-employer bargaining, widespread throughout the Pacific Coast, is most fully developed in San Francisco. The master agreement has replaced the individual company contract to such an extent that three-fourths of the employees in San Francisco are covered by an area-wide contract. Employers' associations not only negotiate such agreements but also administer them.

Industry-wide agreements in San Francisco go back to the "Gold Rush" days,⁴⁸ but the modern master agreement which now characterizes collective bargaining largely dates from 1934. The aggressiveness of the trade-union movement encouraged employers to organize to prevent the successful use of "whipsaw" tactics. An alert union could play one employer against another and raise the level of its contractual arrangements. When the employers organized, this tactic was no longer so successful, for all strikes became industry-wide, and thus more costly to the unions.

The San Francisco Employers' Council, which was formed in 1938 to unite employers generally, stated one of its principle purposes to be: "To promote the recognition and exercise of the right of employers to bargain collectively."⁴⁹ The unions have not always been willing to accept such organization by the employers and the resultant bargaining on a multiemployer basis. The most recent and best known act of resistance gave rise to the Oakland "general strike" in the fall of 1946. The Retail Clerks' Union⁵⁰ had organized in two department stores and demanded recognition. The more than 20 affiliated stores refused to recognize the union or to bargain with it

⁴⁷ Richard A. Lester: *Economics of Labor* (New York, Macmillan, 1941), p. 150.

⁴⁸ Ira B. Cross: *A History of the Labor Movement in California* (Berkeley, University of California Press, 1935).

⁴⁹ San Francisco Employers' Council: *Articles of Incorporation and Bylaws* (1938).

⁵⁰ Retail Clerks' International Protective Association (AFL).

on a store-by-store basis, but insisted that the union would need to secure a majority of the employees in all the stores belonging to the employers' association before it was eligible for collective bargaining rights. Out of this original dispute and the episodes which accompanied it came the general work stoppage by the local AFL unions. While new unions and rival unions have opposed the system because it blocked their efforts to organize, established unions have generally accepted it. Standardization of wages and conditions results, the process of negotiation is simplified as only one contract must be developed, and the union is protected from raiding by rival organizations, which find it difficult to organize an entire industry all at once.

The more or less unique character of employer organization in San Francisco developed as a second step. Once a uniform agreement was signed, unions could still "whipsaw" employers through processing grievances. By getting one concession here and another there, the basis for an improved contract could be laid by standardizing the concessions at their highest levels. This led the employers' associations to administer, as well as negotiate, the contracts. Grievances, in many instances, have been made the property of the association, and no one employer can make a settlement which would disadvantage other members. Job evaluation has, on occasion, been used to standardize job titles, content, and rates as a method of keeping each company in line with all the rest.

The master agreements cover various areas. The standard craft agreement is usually confined to the local labor market area. The industrial agreement tends to cover the geographical area within which the product is competitively produced and may vary from a single town, as in the case of bread, to a subregion, as in the case of fruit and vegetable canning. Some agreements are not confined by either of these locational forces. They span the area, without reference to craft jurisdiction or product market, over which the union has exercised its influence. Quite diverse groups of workers and products may be covered.

The association which most prominently sponsors multiemployer bargaining is the San Francisco Employers' Council. It unites a number of individual employers' associations, as well as single firms otherwise unaffiliated. It corresponds to the Central Labor Council (AFL) and the Industrial Union Council (CIO). In addition to other services, it attempts to coordinate the general approach of employers in the city toward the trade-unions. The Council was organized with a program of bargaining with the unions, not of destroying them.

The plan of an area-wide association of employers has extended outward from San Francisco. A number of cities in Northern Cali-

ifornia have organizations patterned, in part at least, after the council. Similarly oriented associations have been or are being developed in Los Angeles, Phoenix, Reno, and Denver. A Pacific Coast association has been suggested. The expansion of this system, however, has not gone unchallenged. It has been attacked by representatives of the principal national association of industrialists, which is opposed to multiple-employer bargaining. The plan has, however, exhibited survival value in San Francisco, and its supporters can point to the Nation-wide acceptance of industry-wide employer organizations in Sweden and Great Britain.

Multiple-employer bargaining apparently has reduced the number of strikes in San Francisco in the past decade, as compared with Los Angeles and, indeed, with the United States. The greater size of strikes and their augmented cost have encouraged the parties to undertake greater advance deliberation before precipitating a work stoppage. Although the number of strikes has decreased comparatively, the average strike has lasted longer and involved more people, so that man-days lost because of strikes have not been reduced relatively. Resort to arbitration over the terms of a new contract has increased.

The modern type of multiemployer bargaining in San Francisco has not given rise to collusive actions against the consumer, nor have small firms been exploited by the larger firms in each association. The public, however, has been inconvenienced on occasion because the strikes which do occur tend to shut off all sources of supply of goods or services simultaneously.

In summarizing the development of collective bargaining on the Pacific Coast, it is found that: (1) Trade-union agreements more completely cover the "eligible" workers than in the Nation as a whole. Pacific Coast labor is estimated to be 20 percent more fully covered by written contracts than labor in other areas. (2) The unions have had a history, in many important industries, of aggressive action, particularly in the San Francisco and Seattle areas. Some of this aggressiveness originally developed on the water front and in the logging camps. (3) Employers have organized widely, in earlier times to fight, and more recently to bargain with the unions. Some of these associations, especially in San Francisco, administer, as well as negotiate, the collective agreements. (4) While there is great diversity in the bargaining systems, industry-wide or area-wide labor agreements are widely used. The trend is away from the single employer contract. The multiemployer contract has, in several industries, helped bring stability into industrial relations and has indicated maturity of development.

Labor Laws of California, Oregon, and Washington¹

DEVELOPMENT of industry in California, Oregon, and Washington at a later period than in the Eastern and Middle Western areas afforded an opportunity in these States for study of labor laws elsewhere and for the adoption of accepted standards of labor legislation and administration.

Each of the West Coast States has followed recommended standards by establishing a labor department. However, not all labor functions are centralized in these agencies. In California, unemployment compensation and a public employment service are within the authority of the Department of Employment, which is outside the Department of Industrial Relations. In Oregon, five separate agencies, the Bureau of Labor, the Wage and Hour Commission, the Industrial Accident Commission, the Unemployment Compensation Commission, and the Board of Conciliation, have responsibility for various labor functions. In Washington, the Office of Unemployment Compensation and Placement is outside the Department of Labor and Industries.

Minimum-wage laws with coverage limited to women and minors have been enacted by all three States. Wage orders issued under wage board procedure cover most occupations, and in all three States, orders may govern working conditions as well as minimum wages.

The hours legislation also applies primarily to the protection of women and minors. As yet, the standard of an 8-hour day and 40-hour week, recommended by the National Conferences on Labor Legislation for all workers, has not been achieved.

Only California has an hours law (providing for 1 day's rest in 7) which applies to all workers; and, in that State, agriculture and a limited number of other special classes of employment are excepted. The three States regulate hours of men only in occupations recognized as especially hazardous, or when the safety of the public might be jeopardized by long hours of work.

California has a comprehensive industrial homework act, with power to prohibit homework occupations. Oregon has no homework law but has exercised some control of such work under its minimum wage statute. Washington has no homework law.

California and Oregon provide by law for the prompt and regular payment of wages in a quickly negotiable form. All three States also make the services of the labor department available to help workers in collection of unpaid wages.

Protection of workers' safety in these three States is provided for through exercise of rule-making authority, under which standards may

¹ Prepared by Marian L. Mel, of the Division of Labor Standards, U. S. Department of Labor.

be established by safety codes or regulations which have the force of law, to meet specific existing needs.

The workmen's compensation laws of the three States follow in general the standards recommended by the several National Conferences on Labor Legislation. However, while the California and Washington laws provide for compulsory coverage (so that every employer, with certain exceptions, is required to accept the terms of the law) the Oregon law is of the elective type.

Of the three States, California, in 1868, first enacted a law relating to the employment of minors. This early provision for a maximum 8-hour day for certain minors stands out alone in a period when the few other States which had undertaken to protect minors had legislated in terms of a 10-hour day.

The years since the early part of the century have shown continuing advances, but none of these three States, even now, meets all the minimum child labor standards that have been accepted as needed for the protection of child workers. Briefly, these minimum standards are a minimum age of 16 years except for work outside school hours at 14 in nonfactory work; a maximum 8-hour day, 40-hour and 6-day week for children under 18; prohibition of night work, provision of meal periods, prohibition of hazardous employment for young workers under 18; and requirement of employment certificates for the employment of minors under 18.

Although none of these States has a comprehensive industrial relations act, Oregon has a State Board of Conciliation with some defined procedure, and limited powers as to conciliation exist in the other two States.

Each of the three States has an unemployment compensation act, the provisions of which vary as to coverage, amount of benefits, duration of unemployment, and other factors.

A topical summary for each of the three West Coast States is given below. Similarity in the legislation of these States is due largely to the generally similar industrial conditions.

California

The Department of Industrial Relations, which is responsible for the administration of California's labor law, is in marked contrast to the Bureau of Labor Statistics which, in 1883, was directed to collect and report to the legislature biennially upon "every aspect of working conditions in every occupation" (including sanitary conditions in workshops and the number and size of rooms in homes occupied by the poor), and was given an annual appropriation of approximately

\$5,000 to defray all expenses. To the fact-finding functions were added, year by year, provisions for enforcement of labor laws as they were enacted. In 1911, California joined the group of States which enacted workmen's compensation, and adopted a minimum-wage law for women and minors. The special problems arising from an influx of foreign workers and a need for controlling labor camps were bases for specialized legislation. In the fashion of the day, each of these functions was made the responsibility of a special commission which had rule-making as well as administrative authority. However, in 1927, a reorganization by law brought practically all functions under the Department of Industrial Relations, and in 1945, another reorganization by law further clarified the functions of six divisions, all functioning within the framework of this single agency, under the authority of a director.

Workmen's compensation.—The compulsory workmen's compensation law of California is more comprehensive as to coverage of workers than those of many other States, in that it specifically provides for coverage of certain domestic and agricultural workers. It provides full coverage of occupational diseases, instead of schedule coverage, under which, in some States, compensation is paid only for specifically listed diseases. The injured worker's benefits depend on the amount of his wages. Maximum benefits for permanent total disability are \$30 a week and these are payable for life. Total payments in death cases, however, are limited to \$6,000. Medical care must be furnished to injured employees without restrictions as to the amount or cost. The waiting period, during which the injured worker does not receive benefits, is 7 days. In California the employer has the option of insuring either with a private company or in the State fund.

Safety and health.—Employers are required by statute to provide for the safety of workers. When the Industrial Accident Commission (responsible for workmen's compensation administration) was established in 1914, the Industrial Accident Prevention Bureau was set up within the commission. The bureau was later made a separate division, and today is the Division of Industrial Safety, having jurisdiction over all places of employment in the State subject to the workmen's compensation law. Within this division is the Industrial Safety Board. Safety orders, developed after public hearings to which all interested persons are invited for active participation, must receive the formal approval of the Industrial Safety Board, after which they may be legally enforced by the division. In addition to a general safety order, orders relating to 27 specific occupations have been issued. A staff of inspectors is provided for enforcement and for the promotion of safety programs.

The Industrial Welfare Commission has also issued two special orders providing for working conditions relating particularly to women.

Minimum wage.—Under the broad authority of the 1913 minimum-wage act, applicable to women and minors, the Industrial Welfare Commission has applied minimum-wage rates and other standards to practically all occupations employing women and minors. The commission functions within the Division of Industrial Relations. The regulations are in the form of orders, which result from recommendations by wage boards.

Seven orders of the commission (applying to manufacturing; personal service; canning and preserving; professional, technical, clerical, and similar occupations; public housekeeping; laundry, dry cleaning, and dyeing; and mercantile industries) establish a minimum wage of \$18 for a standard workweek of 40 hours. This represents a minimum hourly rate of 45 cents, or \$21.60 for 48 hours. In three orders issued later (farm products, after harvest; transportation; and amusement and recreation), a basic minimum wage of \$20 a week or 50 cents an hour was established. This represents a minimum wage of \$24 for 48 hours. The higher rate reflected continued increases in the cost of living subsequent to the issuance of the earlier orders.²

In all these orders, part-time rates are established for work of less than 40 hours a week; with one exception, the part-time rate is 5 cents higher than the full-time rate. Overtime rates are provided for work in excess of 8 hours a day or 48 hours a week in industries to which the general 8-hour state for women does not apply, as in the handling of perishable fruit, vegetables, and fish, and in professional offices. The orders also require certain standards for meal periods, rest periods, maximum charge for meals and room when furnished, premium rates for split shifts and for reporting for work when work is not furnished. Deductions from wages for tools and for uniforms or their maintenance are prohibited. Under the amusement and recreation order, tips may not be counted as part of the minimum wage. A special order for the motion picture industry makes provisions for such conditions as travel time, costume fitting, and time spent in interviews.

An order covering all industries establishes minimum standards for lighting, ventilation and temperature, water supply, washing, locker, cloak room, rest room, and first-aid facilities, meals, lunchrooms, seats and work tables, weights carried, elevator service, and fire exits. Like the wage orders, these regulations apply only to women and minors.

Hours of work.—As has been pointed out, 1 day of rest, with broad coverage, is the only hours standard applied generally to workers.

² On February 7, 1947, the Industrial Welfare Commission approved a minimum wage of 65 cents for these industries, to be effective about June 1, 1947.

Women are subject to an 8-hour day, 48-hour week, by statute, the most important exceptions from the law being for agriculture, domestic service, and processing of perishable fruits and vegetables. To these standards, the orders of the Industrial Welfare Commission add further limitations of hours and provisions for meal and rest periods for women and minors (discussed under "Minimum Wage"). An 8-hour day applies to any employee in underground mines or workings. Employees engaged in selling or compounding drugs are covered by a limitation of 108 hours and 12 days in 2 consecutive weeks, and to an average of 9 hours a day. Special provisions are applied to trainmen and train dispatchers, and an hour for a noonday meal is required for employees of sawmills, shake-mills, shingle mills, or logging camps. Special time shifts relate to employees working under compressed air.

Industrial home work.—The Industrial Homework Act of 1939 prohibited the manufacture in homes of specified articles, including among others, food or drink, children's clothing and toys, sanitary goods, explosives, drugs, and poisons. Articles not prohibited may be manufactured in homes, under permit, but the Division of Industrial Welfare may prohibit such work in any industry, if, upon investigation, it finds conditions injurious to health and welfare or inimical to maintenance of existing labor standards. One such prohibition (applying to garment manufacture) has been issued. Special authorization provides for employment of aged and disabled persons as home workers.

Child labor.—California has established a minimum age of 15 for work during school hours, with an exemption in cases of economic need for children of 14 who have completed the eighth grade. For work outside school hours during the school term, the minimum age is 14, and for work during school vacation it is 12. These minimum standards also apply to work in domestic service and in agriculture, with an exemption of employment on premises owned or controlled by the parent. Employment certificates, issued by school authorities, are required for employed children up to 18 years of age. Maximum hours are 8 a day, 48 a week for children under 16 in any occupation and for minors between 16 and 18 in any occupation except agriculture, horticulture, viticulture, or domestic service. With certain exemptions, the combined hours of school and work of minors under 18 must not exceed 8; a half-hour meal period is required, with exemptions; and night work between 10 p. m. and 5 a. m. is prohibited for minors under 18. Employment under 16 is prohibited in specified hazardous occupations, and the State Department of Industrial Relations is empowered to add to this list. Such action has been taken in the case of a few occupations.

Wage payment and wage collection.—The California wage payment law requires that employees (except agricultural or domestic employees

living upon the premises) be paid regularly at least twice a month, and promptly upon quitting or discharge. Payment must be in cash or negotiable instruments payable in full in cash on demand. "Kick back" to the employer of part of the wages earned is forbidden, as is payment of less than wages agreed upon under collective bargaining. The Division of Labor Law Enforcement (within the Department of Industrial Relations) is empowered to prosecute civil actions for the collection of wages, penalties, and claims of persons who are financially unable to employ counsel.

According to the official reports, an average of more than 15,000 workers a year sought the division's aid in collection of unpaid wages. During that period the division succeeded in recovering an average of more than half a million dollars a year in unpaid wages. Most of the complaints filed are adjusted by hearings procedure; when this method fails, resort is had to the courts.

Private employment agencies.—Under the California law, private employment agencies, including labor contractors, artists' managers, motion picture and theatrical agencies, must obtain licenses from the Division of Labor Law Enforcement (within the Department of Industrial Relations). In addition, these agencies must file with the division surety bonds and schedules of fees charged for obtaining positions. Fees in excess of those registered may not be charged. Agencies must report on placements made and fees collected, and the division makes regular inspections to prevent violations of the law.

Housing of workers.—The Division of Housing enforces the State Housing Act and laws governing labor camps, auto courts, auto and trailer camps. The Labor Camp Act of 1913 grew out of reports describing intolerable living conditions in camps housing workers in construction, agriculture, and allied industries. Standards established under this act, require that camps must be appropriately located, with good drainage. Such features as proper spacing of buildings and facilities, cleanliness, disposal of waste materials, provision of pure water, and other essential features of camp construction and maintenance, are specifically dealt with. California is estimated to have the largest number of such camps—over 4,500—operated in connection with ranch and industrial, lumber and mill, mining, construction, railroad, cannery, packing house, and many other industries. Camp operators are required to meet the established standards, and inspections are made to secure compliance.

The division is responsible for enforcement of State housing requirements as they relate to hotels and apartment houses, and to dwellings in rural districts. It also has a limited jurisdiction within cities.

Apprenticeship.—The California Apprentice Labor Standards Act became effective in 1939. It repealed earlier laws, and created a State Apprenticeship Council within the Department of Industrial Relations in order to encourage the training of young men and women to become fully skilled journeymen in trades taking from 1 to 6 years to learn. The council establishes the policy of the apprenticeship program governing such matters as minimum wages for apprentices, standards for working conditions, and school attendance. The program is based upon voluntary acceptance by both employers and employees of a plan for training apprentices to become skilled workmen in a given trade or industry. At the end of 1946, there were 1,244 apprenticeship programs in operation throughout the State. These covered 13,902 establishments and 19,688 apprentices.

Industrial relations.—California does not have a labor relations act of the National Labor Relations Act type. The Department of Industrial Relations may investigate labor disputes and mediate, arbitrate, or arrange for the selection of boards of arbitration. This service, however, is dependent upon the further provision that all bona fide parties to such a dispute join in a request for intervention by the department.

A California "hot cargo" law prohibits the secondary boycott. Yellow dog contracts are also prohibited.

Unemployment compensation.—Under the California law, coverage is based on the employment of 1 or more workers at any time and wages in excess of \$100 during a calendar quarter. In order to be eligible for the minimum weekly benefits, the worker must have earned \$300 within a year period. The maximum weekly benefits in California are \$20; the minimum weekly benefits are \$10.

Oregon

The original department of labor was established in 1903. The act directly charged the Commissioner of Labor with the enforcement of laws existing or thereafter to be enacted, and in addition, made him responsible for collecting and reporting information on a wide range of subjects relating to workers. The Commissioner was given power to issue subpoenas and a defined right of entry into workplaces. The labor code at that time contained little more than a 10-hour-day law for women, a child labor law, and a law prohibiting blacklisting.

The administration of labor laws in Oregon today is divided among several agencies. General labor law enforcement (including the Wage and Hour Commission and the Apprenticeship Council) is lodged in the Bureau of Labor; the Industrial Accident Commission administers the Workmen's Compensation Act, and has rule-making authority

for safety of workers; other agencies administering specific laws are the Unemployment Compensation Commission and the Board of Conciliation.

Workmen's compensation.—The Oregon law, which is of the elective type, was enacted in 1913. It applies only to listed "hazardous" or "extrahazardous" employments, so that most employees in non-industrial employments do not receive benefits under the law. It fully complies with the standards recommended for coverage of occupational diseases; that is, it provides general coverage. Oregon does not base the amount of compensation on the amount of wages received by the injured worker, except in case of temporary disability. Payments of benefits in both disability and death cases are for life, but the amounts are low compared with benefits payable in other States. The benefits range from \$9.23 to \$20.31 a week, based on the number of dependents. The law does not provide for a waiting period. It limits payments for medical care to \$250, but authorizes the administrative agency to extend this amount. The Oregon State fund is exclusive and employers may not insure with private companies.

Safety and health.—The Industrial Accident Commission is vested with power to make and enforce all necessary and reasonable rules to insure safety of workplaces. Under this authority, the commission has issued a general safety order and a number of regulations dealing with specific hazardous occupations. Safety inspections are made both by inspectors on the staff of the commission and inspectors from the Bureau of Labor. On request of the Industrial Accident Commission or the Bureau of Labor, the State Board of Health is required to make surveys of sanitation, atmospheric contamination, lighting, ventilation, and other conditions in industrial establishments and to require the elimination of unhygienic practices.

Minimum wage.—In Oregon, the minimum wage law applies only to women and minors. For these workers the Wage and Hour Commission has authority to establish not only minimum rates but also maximum hours and conditions of employment. All nonagricultural industries except domestic work are covered by minimum-wage orders. With the exception of the canning industry, the orders establish a minimum hourly rate of 40 cents for all experienced women and minors. The canning order establishes a 66-cent hourly rate, with payment of time and a half for the first 2 hours over 10 hours, and double time for all hours in excess of 12 a day. Increased overtime rates are required for work on the seventh consecutive workday, and the order specifies the time to be allowed for meal periods.

These regulations result from the recommendations of wage boards in the respective industries.

Under the terms of the wage orders now in force (with certain exceptions) hours of women and minors are limited to 8 a day, and 44 a week. A 45-minute meal or rest period is required after from 5 to 6 hours of work, in all nonagricultural occupations except public house-keeping. A 10-hour day is permitted in the canning industry and in beauty parlors and barber shops, and a 12-hour day in the packing of fruits and vegetables.

Hours.—The hours laws are not of general application. A 10-hour day applies to any mill or factory employee. The 10-hour day for women in a number of employments has been superseded by provisions for shorter hours in orders of the Wage and Hour Commission, which apply only to women and minors. A limit of 14 consecutive hours has been provided by law for employees of common carriers of railroads, a 9-hour day for certain employees in railroad towers and stations, 10 consecutive hours for certain other railroad employees, and an 8-hour day for employees in underground operations.

Industrial home work.—Oregon has no specific law providing for the regulation of industrial home work. Under the manufacturing order of the Wage and Hour Commission, employees are prohibited from allowing the manufacture of specified articles in private homes.

Child labor.—The general minimum age for employment is 14, with provision allowing children of 12 to work during school vacations of 2 weeks or more, on permits from the State Wage and Hour Commission. Employment certificates (issued by the State Wage and Hour Commission through the Commissioner of the Bureau of Labor) are required for employment of minors up to 18. The maximum hours are 8 a day and 44 a week with a 6-day week for minors under 18, except that agricultural work is not covered, and a 10-hour day is allowed in canning, dehydrating, and barreling occupations. Night work is prohibited (between 6 p. m. and 7 a. m.) for children under 16. A 45-minute lunch period is required for minors under 18. A few hazardous occupations are prohibited by statute for children under 16 or under 18. The Wage and Hour Commission is authorized to determine conditions of labor for minors under 18 and has established a minimum age of 16 or 18 in a number of hazardous occupations.

Wage payment and wage collection.—In Oregon, the requirement as to payment of wages every 30 days has a limited coverage; it applies to mines and smelters, mill, logging, mercantile, or manufacturing establishments. The use of nonnegotiable orders or other scrip as a medium of payment is prohibited. A discharged worker must be paid immediately; a quitting employee has the same right if he has given 3 days' notice, otherwise payment must be made within 3 days after

quitting. The Commissioner of Labor is required to assist workmen in collection of wages due. This he may do by adjusting controversies through his office, by taking assignment of such wage claims, or by making complaints in criminal court of violations of the wage-payment law. In 1944, of 244 workers' claims amounting to \$13,767, 15 were adjusted, and 31 workers received between \$5,000 and \$6,000 through court action instituted by the department.

Private employment agencies.—With the exception of agencies placing teachers and professional and clerical workers, every fee-charging employment agency is required to secure a license from the Commissioner of Labor. In addition, the agent must pay a license fee to the State and secure a bond. The law limits the amounts of fees which may be charged, prohibits certain practices, and permits the Commissioner of Labor to revoke the license of any agent who violates the law.

Industrial relations.—The State Board of Conciliation is directed to ascertain the cause of any labor dispute and endeavor to persuade the parties to come to agreement. If they cannot arrive at an agreement, the employer, the employees, or the local officials may request the board to make an investigation of the causes. Some provision is made for procedure to be followed. Oregon has no labor relations act. There is a statutory limitation on the issuance of injunctions in labor disputes. "Yellow dog" contracts are outlawed.

Apprenticeship.—The Oregon apprenticeship law enacted in 1935 was subsequently amended. The Apprenticeship Council, originally an independent agency, is now a part of the Bureau of Labor, under a full-time director. Twenty-five trade-wide programs (that is, none dealing only with an individual plant) had been developed as of the close of 1946. These programs are in operation in 583 establishments and involve 2,488 apprentices.

Unemployment compensation.—The Oregon act provides for coverage based both on the number of workers and the size of the pay roll; i. e., wages during a calendar quarter totaling \$500 or more, and 4 or more workers during such quarter. To establish eligibility for the minimum weekly benefit of \$10, a worker must have earned \$200 in a 1-year period. In case of incapability, this period may be extended by the duration of such incapability, but for not more than 4 calendar quarters.

Washington

In 1897, the Bureau of Labor (the first labor department of Washington) was established. The Commissioner of Labor and his inspectors were authorized to enter workplaces at any time for the purpose of gathering facts and statistics, and examining the methods used to

protect the employees. In reporting on the accomplishments of the first 2 years, the commissioner of labor wrote: "The duties for the first year were much the most difficult, as subsequent inspections indicated that the managers of mills and factories had in time realized that a few dollars expended in the way of safeguards and appliances, prevented the loss of life and limb to their workmen, and lessened their risk as being liable for damages."

The Department of Labor and Industries today has responsibility for administration of all of the State's labor laws, except those providing for unemployment compensation and for an employment service. The expanded activities of the department reflect the industrial growth of the State.

Workmen's compensation.—The compulsory workmen's compensation law of Washington, enacted in 1911, applies only to listed "hazardous" or "extra-hazardous" employments, and provides for complete coverage of occupational diseases. In all types of disabilities, and also in death cases, benefits take the form of a flat pension of \$11.54 a week plus additional amounts for wife and children. Medical care must be furnished, without restrictions as to amount or cost. Washington has a 3-day waiting period. There is an exclusive State fund.

Safety and health.—The original Factory Act, passed in 1903, was very limited in scope. It provided for inspection of mechanical equipment, made certain requirements for safeguarding machinery and for ventilation and sanitation, and provided penalties for violations. The safety law of 1919 provided much broader control and coverage with regard to industrial accidents. Rule-making authority was given to the State Safety Board, and by subsequent legislation was granted to the Director of Labor and Industries. A Division of Safety in the Department of Labor and Industries enforces both statutory safety requirements and the general and special safety standards relating to specific types of employment.

Minimum wage.—In 1913 Washington followed Massachusetts, the pioneer minimum-wage State, in enacting a minimum-wage law applicable to women and minors. The Washington law, like the laws of California and Oregon, gives the power to establish standards not only for minimum wages and hours, but also for conditions of employment. Wage orders issued from 1913 to 1942 established varying minimum wages and standards of hours and working conditions, in practically all women-employing industries. A revision of orders, begun in 1937, increased rates in six industries, to range from 32½ cents an hour in the mercantile industry to 52½ cents an hour in the canning industry. In 1946, an over-all order, governing minimum wages and minimum standards of working conditions, provided for a minimum hourly rate

of 65 cents, a maximum 8-hour day and 48-hour week, and required payment of overtime at time and a half the regular rate of pay after 40 hours. This order was invalidated by the courts on the ground that statutory procedural requirements had not been followed. As a result, the old orders were automatically reestablished.

Child labor.—In Washington, a minimum age of 14 is applicable in factories, workshops, and stores, except that children 12 or over may work at occupations not hazardous in the judgment of the superior court, upon satisfactory evidence that their employment is necessary for their own support or for assistance to their parents. The 14-year-age minimum applies also in a number of occupations specified by order of the Industrial Welfare Committee, including work in fresh fruit and vegetable packing industries and stock-room work in warehouses. Employment certificates (issued by the Women's Division of the Department of Labor and Industries, or its branch offices) are required up to 18 years of age, with a maximum 8-hour day and 6-day week, and a prohibition (with certain exemptions) of night work from 7 p. m. to 6 a. m., for minors under 18. A half-hour meal period is required. Agriculture and domestic service in private homes, however, are exempt from the hours of labor and certificates provisions, and are not covered by the minimum-age standard. Certain hazardous occupations are prohibited for minors under 18 or under 16. In addition, under the minimum wage law, the Industrial Welfare Committee is authorized to determine conditions of labor for minors under 18 and under this authority has prohibited a number of hazardous occupations for such minors.

Hours of work.—Washington has no hours law of general application. Hours of women are limited to 8 a day in any mechanical or mercantile establishment, laundry, hotel, or restaurant; employment in connection with perishable fruit, vegetables, or fish or shellfish is specifically exempt. Further limitations as to hours are established by orders of the Industrial Welfare Commission. A 60-hour week is applied to household or domestic workers, male or female, except in case of emergency; the daily hours of streetcar operators or conductors are limited to 10. Employees of common carriers engaged in the movement of trains may not remain on duty more than 16 consecutive hours, after which they must have a 10-hour rest period.

Industrial home work.—Washington does not regulate industrial home work.

Wage payment and wage collection.—The laws of Washington do not require payment of wages at a regular, specified period. Wages must be paid in lawful money or check, and workers must be paid immediately in case of discharge or quitting. The labor commissioner is authorized to take assignment of wages claims.

Private employment agencies.—Washington has no legislation for the regulation of private employment agencies. One section of the law relating to false statements makes any employment agent or broker who misrepresents matters in connection with the demand for labor, the conditions under which labor or service is to be performed, the duration of the work, or the wages, guilty of a misdemeanor.

Apprenticeship.—The law which provided for a system whereby voluntarily made agreements of apprenticeship would be encouraged was enacted in 1941. It created an Apprenticeship Council within the Department of Labor and Industries, and provided for a Director of Apprenticeship. The council, with the consent of employee and employer groups, establishes standards for apprenticeship agreements, issues such rules and regulations as may be necessary, and carries on other activities in the interest of the program. The law establishes a minimum period of 4,000 hours of reasonably continuous employment as the basis for apprenticeship agreements. At the close of 1946, 152 programs—both single plant and group programs—were in operation and covered 1,650 establishments with 2,304 apprentices.

Industrial relations.—The Director of the Washington Department of Labor and Industries is authorized to use his offices in mediation and conciliation of labor disputes. In case of failure to settle a dispute or failure of the parties to agree to submit the matter to arbitration, the director may require the parties to file with him statements of the facts involved in the dispute, which he may publicize. The law restricts the power of the courts in the issuance of injunctions in labor disputes and forbids yellow dog contracts.

Unemployment compensation.—The Washington act provides for coverage of firms employing one or more workers at any time. A worker, in order to establish eligibility for the minimum weekly benefits of \$10, must have earned \$300 within a year's period. The maximum weekly benefits are \$25.

Cooperatives in the Pacific States¹

COOPERATION in some form has been found in the Pacific States for 75 years or more. During the depression of the 1930's, California and Washington were leading States as regards the self-help cooperatives formed among the unemployed. All these associations—except one or two in each State which became consumers' cooperatives—went out of existence as employment opportunities opened up for the members; while in operation, however, they were of great benefit to the workers who participated in them. Communal colonies, of which California and Washington also have had rather an unusual number, were one of the earliest forms of cooperative effort. One such association dated back to 1854. None had a very long life except one, formed in California, which later moved to Louisiana, where it maintained existence from 1914 to 1938.

All three States shared in the cooperative efforts of the early Granges (lodges of the Patrons of Husbandry) which were the chief pioneers of consumers' cooperation in this country. The consumers' cooperative movement of Oregon has continued to be mainly that of farmers (largely Grangers) and has its own wholesale association.

In California, the latter-day consumers' cooperatives have been largely those of the nonfarm groups; many have been appendages of, or offshoots from, other economic, social, or political movements, and have gone into eclipse when the latter declined. The present distributive cooperatives are rather small and mainly of urban or town origin, but there is a growing interest among farmers in consumers' cooperatives. The urban associations have a cooperative wholesale which is extending its services to the farmers' cooperatives.

The growth of urban cooperatives in Washington has been hampered by a history of previous failure, especially in the early 1920's. The present retail distributive movement is small, but may be accelerated by the formation recently of a new cooperative wholesale. The farmers' consumers' cooperatives in this State are still predominantly those of the Grange, and have their own wholesale association. Non-Grange cooperatives are served by a cooperative wholesale whose trading territory covers Idaho and Oregon also. This association and the California wholesale are members of the nation-wide wholesale, National Cooperatives, Inc.

The Pacific States have an active student cooperative movement—mainly associations which provide low-cost board and rooms for their members. Several of the student cooperatives are large organizations operating a number of dwellings. Campus cooperatives of all three

¹ Prepared by Florence E. Parker, of the Bureau's Labor Economics Staff.

States are affiliated with the Pacific Coast Student Cooperative League, an educational federation formed in 1939. Of the other types of service associations, housing cooperatives have had little development, but California and Oregon together account for over a third of the consumers' water-supply cooperatives in the United States. In Oregon and Washington the cooperative provision of medical and hospital care is being actively promoted, and of seven associations at least four were negotiating for—or had acquired—hospital buildings, by the end of 1946; in California the associations were generally providing care on a contract basis with established agencies or were paying sickness benefits.

In sum, these three States, with 7.4 percent of the population of the United States, account for about 5 percent of the retail distributive associations, 4 percent of the electric-power and telephone associations, 12 percent of the service associations, and nearly 8 percent of the credit unions. The 693 credit unions in existence in these States at the end of 1945 (7.8 percent of the total) had 7.7 percent of the total credit-union membership in the United States and 7.7 percent of the assets.

The membership of the credit unions, students' cooperatives, and medical-care associations is drawn very largely from urban industrial workers, as is also the greater part of the consumers' distributive membership in California. In Oregon and Washington the distributive cooperatives are predominantly farmer and rural in character, although in the latter State consumers' cooperation is expanding in urban areas also.

Only recently has organized labor taken any active interest in the consumers' cooperative movement. Now, however, both AFL and CIO leaders are stressing the fact that union organization and cooperative organization are twin safeguards for the working man, and in a considerable number of places on the Pacific Coast, unionists are sponsoring new associations or giving their support to established cooperatives.

California

California has an interesting cooperative history, but one recording a rather unusual amount of failure. The chart of cooperative development shows rapidly rising and as abruptly falling lines, the peaks being separated by considerable periods of relative quiescence. With some exceptions, consumers' cooperative development in California has been generally among nonfarm people and characterized by small, weak associations that were insecurely rooted, with the result that their average existence has been short. The present movement seems to offer more promise than was true of its predecessors.

Local associations.—There were about 50 active nonfarm retail cooperatives in the State at the end of 1946, of which about 30 were

store associations and the rest buying clubs. Several new associations were in process of organization. There were also in operation about 20 farmers' cooperatives purchasing consumer goods as well as farm supplies.² The Bureau of Labor Statistics has records of some 25 other associations whose present existence is doubtful, including buying clubs at 4 Farm Security Administration migratory labor camps.

Of 72 existing cooperatives of various types for which the year of formation is known, 46 were less than 10 years old, 19 were between 10 and 20 years old, and 7 had been in operation over 20 years. Their average period of existence was 9.7 years. Although this indicates a gradually lengthening cooperative life, it takes no account of the many small ephemeral associations (mainly buying clubs) which have come and gone, dying practically in their infancy.

Records for 12 of the larger nonfarm store associations for 1945³ show an average membership of 403 and an average annual business of \$119,032. Of these, 1 association dates from 1923 and 1 from 1927; 6 were formed in the period 1935-40, and the others since 1940. For 4 farmers' purchasing associations handling consumer goods, the average membership was 1,072 and the average business \$1,295,805.

Of the other types of consumers' cooperatives, nearly a score were students' cooperatives running rooming and boarding houses. One of these, on the University of California campus in Berkeley, was operating 7 such houses, one of which (a large residential hotel accommodating 150 women) it bought in 1946. On the University of California campus in West Los Angeles, a similar organization operated several houses. In addition there were a dozen or more students' bookstores, most of which were only semicooperative in character.

Some half dozen housing associations have been organized, none of which had reached the stage of actual construction by the end of 1946. At least 2 had acquired land and 1 had added so many new members that it had to obtain an additional tract of 60 acres to accommodate them. Other consumers' cooperatives included a year-round recreation camp, and perhaps 10 associations supplying medical care on a prepayment, contract basis. During the war, the war relocation camps at Manzanar and Tulelake also had large cooperatives, which dissolved when the camps were closed. The camps for conscientious objectors also had buying clubs.

At the end of 1945, California had 444 credit unions with a combined membership of 171,391 and assets amounting to \$26,986,463.

Other cooperatives include a few rural electricity associations, a single burial-benefit association, and 2 cooperatives supplying water

² The many such associations handling producer goods only are not here considered; California, of course, leads the Nation in farmers' large-scale cooperative marketing associations.

³ No later data are as yet available.

for their members' households. The self-help productive associations, formed during the depression by the unemployed, have all gone out of business with the exception of 2 that have become partnerships and 1 or 2 that were transformed into consumers' cooperatives.

Of the distributive associations, 2 of the oldest in the State are largely of Italian membership, 1 is Finnish, and 1 is Negro; in 2 (recently formed) the members are returned Japanese-Americans who were evacuated to war relocation camps at the beginning of the war.

Although as early as 1918 the California State Federation of Labor joined with cooperative groups to form the California Producers' and Consumers' Union, organized labor has not generally been so active in the formation of cooperatives in California as in some other States. Several of the San Francisco Bay region cooperatives were formed in the late 1930's by unionists of various trades, and one was started by longshore workers. Recently there has been a renewal of interest which may have concrete results. In Los Angeles, unions of automobile and steel workers are reported to be organizing consumers' cooperatives.

Cooperative wholesale.—Under young and energetic leadership, the Associated Cooperatives of Northern California, started in 1939, has gradually expanded. In 1943 it removed the last three words from its name, an action which symbolized the extension of service to the lower half of the State. By the end of 1946 it was also serving several associations in Nevada. In the year ending October 31, 1946, its business totaled \$519,100, on which its net earnings amounted to \$15,958.

Although in volume the California wholesale is still one of the smallest of the regional wholesales, it is a rapidly growing one, as indicated by the 95-percent increase in its business in 1945-46 as compared with the previous year. At the end of January 1947 it had 36 local associations in membership. Recently, the wholesale has obtained the patronage of several farmers' associations and the affiliation of at least one. Primarily urban in membership, it is nevertheless actively promoting the extension of cooperation in rural areas which have no cooperatives, by the sale of "co-op label" goods (including cooperatively made farm machinery) through private dealers acting as agents for the wholesale. This association is steadily expanding its services. Those added in 1945 and 1946 include insurance (agency) and accounting service for member associations.

The wholesale is a member of the Cooperative League of the USA and of National Cooperatives, Inc.

Oregon

In Oregon even the consumers' cooperatives have been, with very few exceptions, organizations in which the membership consisted almost entirely of farmers.

All the early cooperatives were formed by members of the Grange (popular name of Patrons of Husbandry). Since 1900, however, other farm organizations have been sponsoring cooperatives. The present movement includes several connected with either the Farmers' Union or the Farm Bureau, but the Grange stores are still the most numerous. Of 23 present associations for which sponsorship is known, 15 are those of the Grange, 6 those of the Farmers' Union, and 2 those of the Farm Bureau.

In the city of Portland, consumers' cooperatives have been formed from time to time among industrial workers but, with one possible exception, all are now out of business. As far as is known, none was sponsored, or participated in, by organized labor. However, a new association in which unionists were active was being organized in that city at the end of 1946. The employees of the sawmill at Swisshome, Oreg., owned by Consumers Cooperative Association (Kansas City, Mo.), have recently formed a consumers' cooperative, the membership of which is also open to the farmers in the surrounding country.

Of the 50-odd store cooperatives handling consumers' goods now in existence, for which the year of formation is reported, none dates back farther than 1920, and all but 5 have been formed since 1930. The average age is 12.4 years.

The Grange stores have their own cooperative wholesale, Oregon Grange Wholesale, in Portland, started in 1937. At the end of 1945, it had in affiliation 13 associations, with a combined membership of some 6,000 persons; 17 unaffiliated associations were also purchasing through it. The wholesale's business in 1945 totaled \$659,034. It handles petroleum products and various farm supplies.

Many of the non-Grange stores are affiliated with and served by Pacific Supply Cooperative, a wholesale association with headquarters in Walla Walla, Wash. (see p. 695).

In addition to the store associations, the Oregon consumers' cooperative movement includes 9 students' associations providing rooms and/or meals, and at least 2 (semicooperative) operating bookstores; 2 of the very few consumers' cooperative creamery associations in the United States; 5 associations supplying water for their members' household needs; 1 association in a migratory labor camp; and 1 funeral cooperative. Three Civilian Public Service camps also had buying clubs. As a result of the medical-care meetings held throughout the Pacific Northwest in 1945 and 1946, 1 hospital association

(formed in 1939 but never actually in operation) took on new life and increased its membership to some 500. It had not, by the end of 1946, acquired a building. Two other hospital associations had also been formed in Oregon.

Other types of cooperatives in the State include about a dozen rural electricity associations, 71 credit unions, and 3 fish-canneries.

The credit unions form the single exception to the prevailingly farmer character of the cooperative movement in Oregon. Most of the credit unions draw their membership from employees of industrial companies (factories, mills, lumbering, meat-packing plants, etc.), public employees, railroad men, and others. Very few of the credit unions are of farmer membership.

One town in this State (Hermiston) has an unusual number of cooperatives. These include an electricity association, a grocery store, a Farm Bureau cooperative handling feed, seed, and petroleum products, a Grange cooperative handling fuel, hardware and farm supplies, a turkey-marketing association, a creamery association which manufactures butter and has a cold-storage locker plant, a credit union, and a cooperative telephone association. In these enterprises not only the townspeople (about 800 in number), but also the surrounding farm population, participate. An additional association—a combined laundry and cannery—is composed entirely of women. In the laundry, 125 women use the facilities to do the washing and ironing for their families. Some 500 women put up the winter's supply of fruits and vegetables in the cannery.

Washington

Local associations.—In addition to the distributive associations, Washington has 10 water-supply associations, most of which date back to the early 1920's. It has several students' rooming and boarding houses, one of which is among the largest of its kind in the United States, operating 5 houses and furnishing meals prepared in a central kitchen. There are also several cooperative clubs started in the late 1930's, under the sponsorship of the State Department of Social Security, by old-age pensioners who pooled their small incomes; each group then rented a house in which to live cooperatively. At least a dozen such homes were started, but some of these have gone out of existence as the older members have died. A few workers' productive associations—several shingle mills and a veneer plant—were in operation in this State as late as 1942; their present status is not known. At the end of 1945 there were also 178 credit unions.

Even before the inauguration of the Federal Government's rural electrification program, Washington State had nearly a score of

cooperative electricity associations, some of which also supplied water. Most of these were formed in the period 1920-25, but at least one as early as 1914. After the beginning of the electrification program, some of these became REA associations, using the loan funds obtained thereby to extend and improve their facilities. Others went out of existence. It is believed, however, that a few of these early associations are still in operation. At the close of 1944 there were 14 REA associations in the State.

The present distributive movement consists of a few buying clubs and about 100 associations handling groceries, petroleum products, and farm and household supplies. All but about 15 of these are farmers' cooperatives (mostly those of Grange groups). Of the distributive associations for which the year of formation is known, 14 were established before 1920, 8 in the decade 1920-29, 64 in 1930-39 (of these, 45 were formed in the 3-year period 1933-35), and 4 between 1940 and 1945. The average age of the whole group was 16.9 years—considerably greater than the average for the present movement in either California or Oregon.

As a result of a record of early—and costly—failure, nearly 25 years ago, the cooperative movement has until recently had no support from organized labor in this State, and some of the labor groups are said by a Washington cooperative leader of long experience to have been openly hostile. Within the past few years, however, some unions (notably those of the CIO) have been friendly and have given encouragement. At Everett, union workers (largely in the aircraft industry) were organizing a store association in mid-1946, and various union groups were reported to be participating in the formation of one at Grays Harbor. An association had also been formed in Spokane. At Bremerton, navy yard workers were reported to have started an association to do construction work; this city has also had, since 1937, a store association started by members of the International Association of Machinists but now including unionists of many other trades. At Olympia, trade-unionists—sawmill-plywood workers, mail carriers, and leaders of the Central Labor Council—and Grangers are reported to be working together with the idea of expanding the local buying club into a supermarket.

Both labor and farm groups have been cooperating in the recent drive for cooperative medical and hospital facilities. The Seattle group has had the active participation of representatives of organized boilermakers, milk-wagon drivers, aircraft mechanics, and a central labor council, as well as of the Grange. It recently merged with a doctor-controlled plan into a new consumers' cooperative that will provide clinical and hospital care in its own 60-bed hospital (owned by the doctors' group). Hospital associations at Sequim and Bremer-

ton (on the Olympic Peninsula) were negotiating for buildings at the close of 1946, and a new association had been formed at Deer Park. The Washington associations joined with those in Oregon and Idaho, during the year, in the formation of the Northwest Cooperative Hospital Association.

Wholesale associations.—The distributive associations are served by two cooperative wholesales, both of farmer sponsorship and membership. These are the Grange Cooperative Wholesale (started in 1919), with a membership of 55 associations and a business in 1946 of over 4 million dollars; and Pacific Supply Cooperative (1933) with 101 member associations and a business of some 12½ million dollars. The Grange Wholesale has a branch warehouse in Spokane; in addition to its distributive business, it provides auditing service. Pacific Supply Cooperative, which has 8 branch warehouses in Washington, Idaho, and Oregon, provides trucking and automobile-repair services and manufactures feed and insecticides. It is an affiliate of National Cooperatives, Inc.

The nonfarm associations in the State have been handicapped by the lack of cooperative sources of wholesale supply. An effort made to transform into a consumers' cooperative wholesale a wholesale started to serve the self-help groups came to naught, and the wholesale was liquidated in 1939. At the end of 1945, by arrangement between consumers' cooperative groups and Pacific Supply Cooperative, a new wholesale—Cascade Cooperative Wholesale—was formed. The starting of operations was delayed by the difficulty of finding suitable quarters. However, late in 1946, a large building was obtained in Seattle which is to house the headquarters of the new association and a branch warehouse of Pacific. If the existing associations support the wholesale, the new facilities should strengthen and accelerate the development of consumers' cooperatives in the Puget Sound area.

PART 2. — CURRENT LABOR STATISTICS

Current statistics of labor interest in selected periods¹

[Available in reprint form]

Item	Unit or base period	1947		1946		1939: Average for year
		Feb- ruary	Jan- uary	Decem- ber	Feb- ruary	
<i>Employment and unemployment</i>						
Civilian labor force (BC): Total.....	Thousands.....	58,010	57,790	58,430	53,890	² 54,230
Male.....	do.....	42,100	41,860	41,990	37,890	² 40,950
Female.....	do.....	15,910	15,930	16,440	16,000	² 13,280
Employed ³	do.....	55,520	55,390	56,310	51,240	² 46,930
Male.....	do.....	40,090	39,910	40,300	35,750	² 35,600
Female.....	do.....	15,430	15,480	16,010	15,490	² 11,300
Nonagricultural.....	do.....	48,600	48,890	49,100	44,300	² 37,430
Agricultural.....	do.....	6,920	6,500	7,210	6,940	² 9,500
Unemployed.....	do.....	2,490	2,400	2,120	2,650	² 7,300
Male.....	do.....	2,010	1,950	1,690	2,140	² 5,350
Female.....	do.....	480	450	430	510	² 1,950
Civilian employment in nonagricultural establishments: Total ³	do.....	39,386	39,470	40,726	36,509	30,353
Manufacturing.....	do.....	15,114	15,048	15,026	12,536	10,078
Mining.....	do.....	826	827	819	808	845
Construction ⁴	do.....	1,325	1,435	1,617	1,260	1,753
Transportation and public utilities.....	do.....	3,925	3,933	3,976	3,907	2,912
Trade.....	do.....	7,838	7,866	8,589	7,505	6,618
Finance, service and miscellaneous.....	do.....	5,198	5,193	5,260	5,031	4,160
Federal, State, and local government, excluding Federal force-account construction.....	do.....	5,160	5,168	5,439	5,462	3,988
Military personnel.....	do.....	1,906	1,987	2,204	5,956	367
Production-worker employment:						
Manufacturing.....	do.....	12,329	12,269	12,271	9,989	8,192
Bituminous-coal mining.....	do.....	336	336	326	341	371
Class I steam railroads, including salaried employees (ICC).....	do.....	1,325	1,334	1,353	1,367	988
Hired farm workers (BAE).....	do.....	1,587	1,525	2,060	1,424	⁵ 1,784
<i>Hours and earnings</i>						
Average weekly earnings:						
Manufacturing.....		\$47.28	\$46.94	\$46.86	\$40.58	\$23.86
Bituminous-coal mining.....			\$69.58	\$69.56	⁶ \$54.16	\$23.88
Retail trade.....			\$34.40	\$33.73	⁶ \$30.77	\$21.17
Building construction (private).....		\$58.97	\$59.97	\$60.32	\$53.04	\$30.39
Average weekly hours:						
Manufacturing.....	Hours.....	40.4	40.5	40.9	40.5	37.7
Bituminous-coal mining.....	do.....		46.7	46.7	⁶ 43.3	27.1
Retail trade.....	do.....		39.9	40.2	⁶ 40.5	43.0
Building construction (private).....	do.....	36.9	37.6	38.4	37.3	32.6
Average hourly earnings:						
Manufacturing.....		\$1.170	\$1.158	\$1.145	\$1.002	\$0.633
Bituminous-coal mining.....			\$1.490	\$1.491	⁶ \$1.259	\$0.886
Retail trade.....			\$0.951	\$0.919	⁶ \$0.835	\$0.536
Building construction (private).....		\$1.599	\$1.594	\$1.569	\$1.422	\$0.933
Average straight-time hourly earnings in manufacturing, using—						
Current employment by industry.....			\$1.120	\$1.104	⁶ \$0.966	\$0.622
Employment by industry as of January 1941.....			\$1.120	\$1.106	⁶ \$0.970	\$0.640
Quarterly farm wage rate, per day without board (BAE).....			\$4.83		⁶ \$4.40	⁶ \$1.53
<i>Industrial injuries and labor turn-over</i>						
Industrial injuries in manufacturing per million man-hours worked.....				14.9	⁷ 17.0	15.4
Labor turn-over per 100 employees in manufacturing:						
Total separations.....		4.4	4.9	4.5	6.3	⁸ 2.6
Quits.....		3.1	3.5	3.0	3.9	⁸ 0.6
Lay-offs.....		0.8	.9	1.0	1.7	⁸ 1.9
Total accessions.....		4.9	6.0	4.3	6.8	⁸ 3.1
<i>Labor-management disputes</i>						
Work stoppages beginning in month:						
Number.....		290	290	168	290	218
Number of workers involved.....	Thousands.....	90	100	76	134	98
All work stoppages during month:						
Number of man-days idle.....	do.....	1,225	1,250	3,127	22,919	1,484
Man-days idle as percent of available working time.....		0.2	0.2	0.5	4.2	0.26

Footnotes at end of table.

Current statistics of labor interest in selected periods ¹—Continued

1939: Average for year	Item	Unit or base period	1947		1946		1939: Average for year
			Feb- ruary	Jan- uary	Decem- ber	Feb- ruary	
	<i>Prices</i>						
	Consumers' price index (for moderate in- come families in large cities): All items.....	1935-39=100	152.8	153.1	153.3	129.6	99.4
54,230	All foods.....	1935-39=100	182.3	183.8	185.9	139.6	95.2
40,960	Cereals and bakery products.....	1935-39=100	144.1	143.4	141.7	109.8	94.5
13,280	Meats.....	1935-39=100	196.7	199.0	197.8	131.3	96.6
46,930	Dairy products.....	1935-39=100	183.2	190.1	200.9	136.6	95.9
35,600	Eggs.....	1935-39=100	169.9	181.7	201.1	144.2	91.0
11,300	Fruits and vegetables.....	1935-39=100	191.7	187.9	185.0	181.1	94.5
37,430	Beverages.....	1945-39=100	182.8	178.3	176.2	124.9	95.5
9,500	Fats and oils.....	1935-39=100	201.3	201.9	207.3	125.4	87.7
7,300	Sugar and sweets.....	1935-39=100	178.1	176.2	175.3	126.9	100.6
5,350	Clothing.....	1935-39=100	180.2	178.3	176.5	150.5	100.5
1,950	Rent.....	1935-39=100	⁸ 108.9	⁸ 108.8		⁹ 108.4	104.3
30,353	Fuel, electricity, and ice.....	1935-39=100	117.5	117.3	115.5	111.0	99.0
10,078	Housefurnishings.....	1935-39=100	179.6	178.5	177.1	149.7	101.3
845	Miscellaneous.....	1935-39=100	136.7	136.6	136.1	125.6	100.7
1,753	Wholesale price index: All commodities.....	1926=100	¹⁰ 144.6	¹⁰ 141.5	¹⁰ 140.9	107.7	77.1
2,912	All commodities other than farm prod- ucts.....	1926=100	¹⁰ 138.8	¹⁰ 136.1	¹⁰ 134.8	102.5	79.5
6,618	All commodities other than farm prod- ucts and foods.....	1926=100	¹⁰ 128.6	¹⁰ 127.6	¹⁰ 124.7	101.3	81.3
4,160	Farm products.....	1926=100	170.4	165.0	168.1	130.8	65.3
3,988	Foods.....	1926=100	162.0	156.2	160.1	107.8	70.4
367	<i>National income and expenditures</i>						
8,192	National income payments (BFDC).....	Millions	\$13,402	\$14,402	\$15,852	\$12,068	¹¹ \$5,319
371	Consumer expenditures for goods and serv- ices (BFDC).....	do			¹¹ \$36,115	¹¹ \$30,056	¹¹ \$16,651
988	Retail sales (BFDC).....	do	\$7,373	\$7,839	\$10,282	\$6,208	¹¹ \$2,749
1,784	<i>Production</i>						
	Industrial production index, unadjusted (FR): Total.....	1935-39=100	184	184	179	148	100
\$23.86	Manufactures.....	1935-39=100	192	192	188	151	109
\$23.88	Minerals.....	1935-39=100	140	140	131	134	106
\$21.17	Bituminous coal (BM).....	Thousands of short tons	50,640	58,869	42,320	¹² 50,248	32,905
\$30.39	Car loadings index, unadjusted (FR).....	1935-39=100	133	138	131	119	101
37.7	Electric energy (FPC): Total.....	Millions of kw.-hr.	23,698	25,975	24,875	19,449	(¹³)
27.1	Utilities (production for public use).....	do	19,615	21,639	20,847	16,193	¹³ 9,433
43.0	Industrial establishments.....	do	4,083	4,336	4,028	3,256	(¹³)
32.6	<i>Construction</i>						
\$0.633	Construction expenditures.....	Millions	1,031	922	852	626	¹⁴ 429
\$0.886	Value of urban building construction started.....	do	271	266	226	373	(¹⁵)
\$0.536	New nonfarm family dwelling units.....		44,400	41,000	35,200	51,000	¹⁵ 30,700
\$0.933							

¹ Source: Bureau of Labor Statistics unless otherwise indicated. Abbreviations used: BC (Bureau of the Census); ICC (Interstate Commerce Commission); BAE (Bureau of Agricultural Economics); BFDC (Bureau of Foreign and Domestic Commerce); FR (Federal Reserve); BM (Bureau of Mines); FPC (Federal Power Commission). Most of the current figures are preliminary.

² 10-month average—March to December 1940—not comparable with later figures. Revisions are in process.

³ Excludes employees on public emergency work, these being included in unemployed civilian labor force. Civilian employment in nonagricultural establishments differs from nonagricultural employment in civilian labor force mainly because of the inclusion in the latter of such groups as self-employed and domestic and casual workers.

⁴ Includes workers employed by construction contractors and Federal force-account workers (nonmain-
tenance construction workers employed directly by the Federal Government). Other force-account and
nonmaintenance construction employment is included under manufacturing and other groups.

⁵ February.

⁶ January.

⁷ December 1945.

⁸ All cities not surveyed: Rent index of January based on 5 cities and that of February on 6 cities.

⁹ March 1946.

¹⁰ Includes current motor-vehicle prices. See note on p. 717 of this issue.

¹¹ Fourth quarter.

¹² Not available.

¹³ Not available.

¹⁴ Not available.

¹⁵ Not available.

Labor - Management Disputes

Controversies and Significant Developments, March 1947

MARCH WITNESSED the termination of two prolonged and bitter work stoppages which had attracted considerable public attention. The first of these disputes involved the United Automobile Workers (CIO) and the J. I. Case Co., manufacturers of agricultural implements. It arose over issues of wages and union security and resulted in stoppages at four of the company's plants, beginning on December 26, 1945. Within 3 months, settlements were reached in two of the plants. The stoppage at Rockford, Ill., however, continued for almost a year; and it was not until March 9, 1947—more than 14 months after the strike began—that union members at the Racine, Wis., plant voted by a ratio of 2 to 1 to return to their jobs despite their expressed dissatisfaction with the new contract terms. The agreement provided for wage increases averaging 25 cents per hour, but contained no provision for a closed shop or compulsory check-off which the union had originally demanded.

The 11-month strike against the Allis-Chalmers Manufacturing Co. plant in West Allis, Wis., which began April 30, 1946, was ended March 23, following a 3 to 1 vote by local members of the United Automobile Workers (CIO). Previously, there were separate settlements of stoppages, which lasted from 5 to 7 months, at six other Allis-Chalmers plants. Striking workers at the West Allis plant went back to their jobs without a union contract but with a wage increase of 18½ cents an hour, which nonstrikers had been receiving since August 1946. The issues of a union shop and revised grievance procedures were still unsettled.

Settlement of the J. I. Case and Allis-Chalmers' strikes focused attention on other postwar work stoppages of long duration still in progress. Of these, the most significant is the strike of about 500 workers of the Toledo, Peoria and Western Railroad which began October 1, 1945. This controversy was further high-lighted with the fatal shooting of its president, George P. McNear, by unknown assail-

ants on Monday evening, March 10, 1947. Thirteen months earlier two union pickets were shot to death and three were injured by T. P. & W. railroad guards. Thirteen railroad unions have insisted that the carrier accept "standard" wage and rule provisions; management has steadfastly maintained that such rules would not be adopted.

Work Stoppages in February 1947

THE LOW LEVEL of strike activity which has prevailed since early December continued throughout February and March. About the same number of stoppages (290) began in February as in the previous month. These labor-management disputes involved approximately 90,000 workers or slightly fewer wage earners than the stoppages which began in January. Including 170 stoppages which continued from preceding months, a total of 460 stoppages, involving 145,000 workers, were in effect at one time or another in February.

In contrast with a year ago when postwar controversies reached their peak, idleness in plants directly affected by shutdowns this February totaled 1,230,000 man-days, or about one-eighteenth of the time loss recorded in February 1946 during the steel, electrical, auto, and other large stoppages. In the first quarter of 1947, only one relatively large stoppage occurred—a 2-day dispute of approximately 14,000 Detroit auto workers—whereas, during the first 3 months of 1946 10 large stoppages began in which over a million and a quarter workers were involved.

*Work stoppages in February 1947 with comparable figures for earlier periods*¹

Month	Work stoppages beginning in the month		Man-days idle (all stoppages)	
	Number	Workers involved	Number	Percent of estimated working time (all industries)
February 1947 ²	290	90,000	1,230,000	0.2
January 1947 ²	290	100,000	1,250,000	.2
December 1946.....	168	76,000	3,130,000	.5
February 1946.....	290	134,000	22,900,000	4.2
January 1946.....	337	1,370,000	19,700,000	3.1

¹ All known work stoppages, arising out of labor-management disputes, involving 6 or more workers and continuing as long as a full day or shift are included in reports of the Bureau of Labor Statistics. Figures on "workers involved" and "man-days idle" cover all workers made idle in establishments directly involved in a stoppage. They do not measure the indirect or secondary effects on other establishments or industries whose employees are made idle as a result of material or service shortages.

² Preliminary estimates.

Activities of the U. S. Conciliation Service in February 1947

DURING FEBRUARY 1947 the United States Conciliation Service closed 924 dispute cases involving 376,975 employees—approximately 11 percent fewer than were closed in the previous month.

The decline in the number of work stoppages throughout the Nation since November 1946 is reflected in the decline in the number of work stoppage assignments of the Service and consequently in the number of work stoppages terminated. Only 143 strike assignments were terminated in February 1947 as compared with 179 in the previous month, 222 in February 1946, and an average of 286 per month throughout the year 1946.

In February 1947 more than 62 percent of work stoppages closed and 68 percent of all disputes closed involved the issue of wages. Stoppages caused by unresolved grievances accounted for 17.5 percent of the total stoppages terminated as compared with a range of from 10 to 15 percent in the preceding 3 months.

Cases closed by the U. S. Conciliation Service in February 1947 by type of situation and type of disposition

Type of disposition	Total		Work stoppages		Threatened work stoppages		Controversies		Other situations	
	Cases	Work-ers	Cases	Work-ers	Cases	Work-ers	Cases	Work-ers	Cases	Work-ers
All methods.....	1,144	447,610	143	50,759	432	130,206	349	196,010	220	70,635
Agreement of the parties.....	770	345,102	120	41,824	380	117,594	270	185,684	0	0
Dispute called off.....	65	13,181	9	1,103	27	9,913	29	2,165	0	0
Unable to adjust.....	1	5	1	5	0	0	0	0	0	0
Referred to NLRB and other	44	10,197	8	6,434	17	1,928	19	1,835	0	0
Referred to arbitration.....	39	7,823	5	1,393	8	771	26	5,659	0	0
Consent elections and union memberships.....	5	667	0	0	0	0	5	667	0	0
Decisions rendered in arbitration..	¹ 79	12,089	0	0	0	0	0	0	79	12,089
Technical services completed.....	20	2,156	0	0	0	0	0	0	20	2,156
Miscellaneous services.....	121	56,390	0	0	0	0	0	0	121	56,390

¹ This figure includes 3 arbitration cases in which settlements other than arbitration decisions were made.

Prices and Cost of Living

Indexes of Consumers' Prices in Large Cities, February 1947¹

RETAIL PRICES of living essentials commonly bought by moderate-income city families averaged 0.2 percent lower on February 15, 1947, than on January 15. A decline in the family food bill more than offset higher prices for all other major groups of items in the family budget. Retail food prices dropped 0.8 percent; all other living essentials advanced 0.4 percent between mid-January and mid-February.

This small over-all decline between January and February—the second since the mid-December all-time high—is in contrast to the rapid advances of 1 and 2 percent a month during the last half of 1946. The consumers' price index on February 15, 1947, was 152.8 (1935-39=100). In mid-February consumers' goods and services used by families in large cities were 17.9 percent higher than a year ago and 51.6 percent above the January 1, 1941, level.

Retail food prices in large cities declined 0.8 percent over the month and on February 15, 1947, were 2.9 percent below the mid-November 1946 all-time high of 187.7 (1935-39=100). A seasonal drop of 6.5 percent in egg prices was accompanied by a 3.6-percent decline for

¹ The "consumers' price index" for moderate-income families in large cities, formerly known as the "cost of living index," measures average changes in retail prices of selected goods, rents, and services, weighted by quantities bought by families of wage earners and moderate-income workers in large cities in 1934-36. The items priced for the index constituted about 70 percent of the expenditures of city families whose income averaged \$1,524 in 1934-36.

The indexes are based on time-to-time changes in the cost of goods and services purchased by moderate-income families in large cities. They do not indicate whether it costs more to live in one city than in another.

Data relate to the fifteenth of each month except those for January 1941 in tables 1 and 2, which have been estimated for January 1.

January 1, 1941, is the wage base date for determining allowable "cost of living" wage increases under the Little Steel formula and under the wage-price policy of February 1946. January 1, 1941, indexes in tables 1 and 2 have been estimated by assuming an even rate of change from December 15, 1940, to the next pricing period.

Food prices are collected monthly in 56 cities during the first 4 days of the week which includes the Tuesday nearest the fifteenth of the month. Aggregate costs of foods in each city, weighted to represent food purchases of families of wage earners and moderate-income workers, have been combined for the United States with the use of population weights. In March 1943 the number of cities included in the food index was increased from 51 to 56, and the number of foods from 54 to 61.

Prices of clothing, housefurnishings, and miscellaneous goods and services are obtained in 34 large cities in March, June, September, and December. In intervening months, prices are collected in 21 of the 34 cities for a shorter list of goods and services.

dairy products and lower prices for meats, fish, and poultry. Fresh fruit and vegetable prices advanced 2.8 percent on the average during the month, as green beans increased 35 percent and lettuce rose 13 percent. Retail prices of coffee and sugar continued to advance.

Clothing prices, advancing for the forty-fourth consecutive month, were 1.1 percent higher in mid-February than in mid-January and almost 80 percent higher than in August 1939. Higher prices reported for cotton housedresses, rayon dresses, hosiery, and undergarments were a reflection of earlier increases in manufacturers' prices. Prices of men's suits and topcoats, and work clothing also rose in most cities. Footwear prices advanced 1.2 percent during the month.

Housefurnishings prices increased 0.6 percent between mid-January and mid-February, as prices of washing machines, gas stoves, and floor coverings continued to rise. Miscellaneous goods and services costs rose 0.1 percent. Higher prices for gasoline, newspapers, motion-picture admissions, and beauty-shop services more than offset slightly lower prices for household cleaning supplies.

TABLE 1.—*Indexes of consumers' prices for moderate-income families and percent changes, February 15, 1947, compared with earlier periods*

Group	Feb. 15, 1947	Jan. 15, 1947	Feb. 15, 1946	Aug. 15, 1945	Jan. 1, 1941	Aug. 15, 1939
	This month	Last month	Year ago	VJ-day	Wage base date *	Month before war in Europe
Indexes (1935-39=100)						
All items.....	152.8	153.1	129.6	129.3	100.8	98.6
Food.....	182.3	183.8	139.6	140.9	97.6	93.5
Clothing.....	180.2	178.3	150.5	146.4	101.2	100.3
Rent.....	108.9	108.8			105.0	104.3
Fuel, electricity, and ice.....	117.5	117.3	111.0	111.4	100.8	97.5
Gas and electricity.....	92.2	91.9	93.8	95.2	97.5	99.0
Other fuels and ice.....	142.1	142.0	127.8	127.2	104.0	96.3
Housefurnishings.....	179.6	178.5	149.7	146.0	100.2	100.6
Miscellaneous.....	136.7	136.6	125.6	124.5	101.8	100.4
Percent change to Feb. 15, 1947						
All items.....		-0.2	17.9	18.2	51.6	55.0
Food.....		-1.8	30.6	29.4	86.8	95.0
Clothing.....		1.1	19.7	23.1	78.1	79.7
Rent.....		.1			3.7	4.4
Fuel, electricity, and ice.....		.2	5.9	5.5	16.6	20.5
Gas and electricity.....		.3	-1.7	-3.2	-5.4	-6.9
Other fuels and ice.....		.1	11.2	11.7	36.6	47.6
Housefurnishings.....		.6	20.0	23.0	79.2	78.5
Miscellaneous.....		.1	8.8	9.9	34.3	36.2

Based on rent changes in 6 cities, it was estimated that the rent index for all large cities combined increased 0.1 percent to 108.9 on February 15, 1947. Rents advanced 0.3 percent in Memphis and New Orleans and 0.4 percent in Washington between September 1946 and February 1947 and 0.4 in Philadelphia between August 1946 and February 1947.

Fuel, electricity, and ice costs rose 0.2 percent on the average. Changes in rates increased the cost of gas to domestic consumers in Philadelphia by 11 percent; rate reductions lowered electricity costs to Denver consumers by 21 percent.

TABLE 2.—Percent change in consumers' price index from specified dates to February 15, 1947, by cities

City	Indexes 1935-39= 100	Percent changes to February 15, 1947 from —				
	Feb. 15, 1947	Jan. 15, 1947	Feb. 15, 1946	Aug. 15, 1945	Jan. 1, 1941	Aug. 15, 1939
	This month	Last month	Year ago	VJ- day	Wage base date	Month before war in Europe
Average.....	152.8	-0.2	17.9	18.2	51.6	55.0
Baltimore, Md.....	155.8	-.3	18.5	17.5	54.7	57.9
Birmingham, Ala.....	157.5	-.6	18.5	17.6	55.0	59.9
Boston, Mass.....	146.8	-1.0	17.4	16.8	48.1	51.2
Buffalo, N. Y.....	152.0	-.3	17.1	17.5	49.2	54.3
Chicago, Ill.....	152.6	-.2	19.4	19.3	50.8	54.6
Cincinnati, Ohio.....	153.2	.4	18.8	18.5	53.8	57.5
Cleveland, Ohio.....	155.4	-.3	18.1	17.6	52.4	55.4
Denver, Colo.....	151.7	.5	18.5	18.8	51.7	53.9
Detroit, Mich.....	152.6	-.1	15.6	16.3	51.1	54.9
Houston, Tex.....	153.7	0	21.2	20.6	50.7	52.6
Kansas City, Mo.....	148.3	.5	16.5	16.2	50.7	50.4
Los Angeles, Calif.....	155.4	.3	17.3	18.6	51.6	54.6
Minneapolis, Minn.....	148.8	.4	18.1	19.1	46.2	49.2
New York, N. Y.....	153.9	-.3	17.2	18.4	52.4	55.5
Philadelphia, Pa.....	151.5	-.5	18.1	18.0	52.7	54.9
Pittsburgh, Pa.....	155.7	.2	18.9	19.6	53.9	58.2
St. Louis, Mo.....	151.6	.4	18.3	18.9	50.1	54.5
San Francisco, Calif.....	158.1	-.6	18.4	19.3	55.3	59.2
Savannah, Ga.....	162.3	.1	17.3	17.4	60.1	63.4
Seattle, Wash.....	155.0	-.3	16.0	16.6	51.8	54.5
Washington, D. C.....	151.3	-.4	16.1	17.4	51.5	53.4

TABLE 3.—Percent change in consumers' price index from Jan. 15, to Feb. 15, 1947, by cities and groups of items

City	All items	Food	Clothing	Rent	Fuel, electricity, and ice			House-furnishings	Miscellaneous
					Total	Gas and electricity	Other fuels and ice		
Average.....	-0.2	-0.8	1.1	0.1	0.2	0.3	0.1	0.6	0.1
Atlanta, Ga.....	0				0	0	0		
Baltimore, Md.....	-3	-9	3		0	0	0	1.6	.2
Birmingham, Ala.....	-6	-1.3	0		0	0	0	-6	0
Boston, Mass.....	-1.0	-2.8	1.8		0	-1	.1	.7	.4
Buffalo, N. Y.....	-3	-1.5	1.4		0	0	0	.8	-1
Chicago, Ill.....	-2	-7	1.3		.1	0	.1	.3	-1
Cincinnati, Ohio.....	.4	.2	1.5		0	0	0	2.4	-1
Cleveland, Ohio.....	-3	-1.2	1.5		0	0	0	.4	0
Denver, Colo.....	.5	.4	3.0		-3.1	-11.4	2.0	.9	0
Detroit, Mich.....	-1	-8	.7		-1	-5	0	.9	.3
Houston, Tex.....	0	-1.0	1.4		0	0	0	1.5	.2
Indianapolis, Ind.....		-1		² -1	0	0	-1		
Jacksonville, Fla.....		-5			0	0	0		
Kansas City, Mo.....	.5	.7	2.1		0	0	0	.1	0
Los Angeles, Calif.....	.3	-1	.9		0	0	0	1.6	.4
Manchester, N. H.....		-3.3			-1	0	-1		
Memphis, Tenn.....		-8		² .3	0	0	0		
Milwaukee, Wis.....		1.2			1.0	.5	1.3		
Minneapolis, Minn.....	.4	.3	2.2		.4	0	.6	-3	.1
Mobile, Ala.....		-3			0	.1	0		
New Orleans, La.....		-3		² .3	0	0	0		
New York, N. Y.....	-3	-8	.7		-1	0	-2	-1	-3
Norfolk, Va.....		.2			0	0	0		
Philadelphia, Pa.....	-5	-1.4	.2	¹ .4	2.0	5.7	0	.1	0
Pittsburgh, Pa.....	.2	.2	.7		.1	.1	0	-1	.2
Portland, Maine.....		-3.1			0	0	0		
Portland, Oreg.....		-8			-1.5	-2	-2.3		
Richmond, Va.....		.3			0	0	0		
St. Louis, Mo.....	.4	.5	1.5		0	0	0	-6	.1
San Francisco, Calif.....	-6	-2.6	2.2	¹ .1	0	0	0	.6	.5
Savannah, Ga.....	.1	-3	2.1		0	0	0	-7	.2
Scranton, Pa.....		.9			0	0	0		
Seattle, Wash.....	-3	-1.2	.7		.2	0	.2	.6	.1
Washington, D. C.....	-4	-1.3	-5	² .4	.7	0	.9	1.1	.1

¹ Change from August 15, 1946.² Change from September 15, 1946.

TABLE 4.—*Indexes of consumers' prices for moderate-income families in large cities, 1935 to February 1947*

Year and month	Indexes (1935-39=100) of cost of—						
	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
1935.....	98.1	100.4	96.8	94.2	100.7	94.8	98.1
1936.....	99.1	101.3	97.6	96.4	100.2	96.3	98.7
1937.....	102.7	105.3	102.8	100.9	100.2	104.3	101.0
1938.....	100.8	97.8	102.2	104.1	99.9	103.3	101.5
1939.....	99.4	95.2	100.5	104.3	99.0	101.3	100.7
1940.....	100.2	96.6	101.7	104.6	99.7	100.5	101.1
1941.....	105.2	105.5	106.3	106.2	102.2	107.3	104.0
1942.....	116.5	123.9	124.2	108.5	105.4	122.2	110.9
1943.....	123.6	138.0	129.7	108.0	107.7	125.6	115.8
1944.....	125.5	136.1	138.8	108.2	109.8	136.4	121.3
1945.....	128.4	139.1	145.9	108.3	110.3	145.8	124.1
1945:							
Jan. 15.....	127.1	137.3	143.0	(1)	109.7	143.6	123.3
Feb. 15.....	126.9	136.5	143.3	(1)	110.0	144.0	123.4
Mar. 15.....	126.8	135.9	143.7	108.3	110.0	144.5	123.6
Apr. 15.....	127.1	136.6	144.1	(1)	109.8	144.9	123.8
May 15.....	128.1	138.8	144.6	(1)	110.0	145.4	123.9
June 15.....	129.0	141.1	145.4	108.3	110.0	145.8	124.0
July 15.....	129.4	141.7	145.9	(1)	111.2	145.6	124.3
Aug. 15.....	129.3	140.9	146.4	(1)	111.4	146.0	124.5
Sept. 15.....	128.9	139.4	148.2	108.3	110.7	146.8	124.6
Oct. 15.....	128.9	139.3	148.5	(1)	110.5	146.9	124.7
Nov. 15.....	129.3	140.1	148.7	(1)	110.1	147.6	124.6
Dec. 15.....	129.9	141.4	149.4	108.3	110.3	148.3	124.8
1946:							
Jan. 15.....	129.9	141.0	149.7	(1)	110.8	148.8	125.4
Feb. 15.....	129.6	139.6	150.5	(1)	111.0	149.7	125.6
Mar. 15.....	130.2	140.1	153.1	108.4	110.5	150.2	125.9
Apr. 15.....	131.1	141.7	154.5	(1)	110.4	152.0	126.7
May 15.....	131.7	142.6	155.7	(1)	110.3	153.7	127.2
June 15.....	133.3	145.6	157.2	108.5	110.5	156.1	127.9
July 15.....	141.2	165.7	158.7	(1)	113.3	157.9	128.2
Aug. 15.....	144.1	171.2	161.2	108.7	113.7	160.0	129.8
Sept. 15.....	145.9	174.1	165.9	108.8	114.4	165.6	129.9
Oct. 15.....	148.6	180.0	168.1	(1)	114.4	168.5	131.0
Nov. 15.....	152.2	187.7	171.0	(1)	114.8	171.0	132.5
Dec. 15.....	153.3	185.9	176.5	(1)	115.5	177.1	136.1
1947:							
Jan. 15.....	153.1	183.8	178.3	108.8	117.3	178.5	136.6
Feb. 15.....	152.8	182.3	180.2	108.9	117.5	179.6	136.7

¹ Rents not surveyed in this month.

Retail Prices of Food in February 1947

RETAIL PRICES OF FOOD in January 1947 in relation to those in selected preceding periods are shown in the accompanying tables.

TABLE 1.—Percent change in retail prices of food in 56 large cities combined, by commodity groups, in specified periods

Commodity group	Jan. 15, 1947, to Feb. 15, 1947	Feb. 15, 1946, to Feb. 15, 1947	Aug. 15, 1945, to Feb. 15, 1947	Jan. 15, 1941, to Feb. 15, 1947	Aug. 15, 1939, to Feb. 15, 1947
All foods.....	-0.8	+30.6	+29.4	+86.4	+95.0
Cereals and bakery products.....	+5.3	+31.2	+32.1	+51.8	+54.3
Meats.....	-1.2	+49.8	+49.2	+94.6	+103.5
Beef and veal.....	-5	+60.6	+60.3	+73.7	+90.8
Pork.....	+4	+70.2	+70.2	+122.5	+117.7
Lamb.....	-5	+49.2	+49.8	+107.0	+106.8
Chickens.....	-5.0	+16.7	+12.2	+81.6	+86.6
Fish, fresh and canned.....	-4.6	+14.0	+18.8	+117.9	+159.7
Dairy products.....	-3.6	+34.1	+37.3	+74.3	+96.8
Eggs.....	-6.5	+17.8	-9	+74.4	+87.3
Fruits and vegetables.....	+2.0	+5.9	+4.5	+105.5	+107.3
Fresh.....	+2.8	-1.9	-3.5	+102.7	+104.0
Canned.....	-6	+31.9	+32.5	+88.8	+88.4
Dried.....	+3	+59.0	+60.1	+171.0	+198.9
Beverages.....	+2.5	+46.4	+46.6	+101.1	+92.6
Fats and oils.....	-3	+60.5	+62.3	+150.7	+138.2
Sugar and sweets.....	+1.1	+40.3	+40.7	+86.9	+86.3

TABLE 2.—Indexes of retail prices of food in 56 large cities combined,¹ by commodity groups, on specified dates

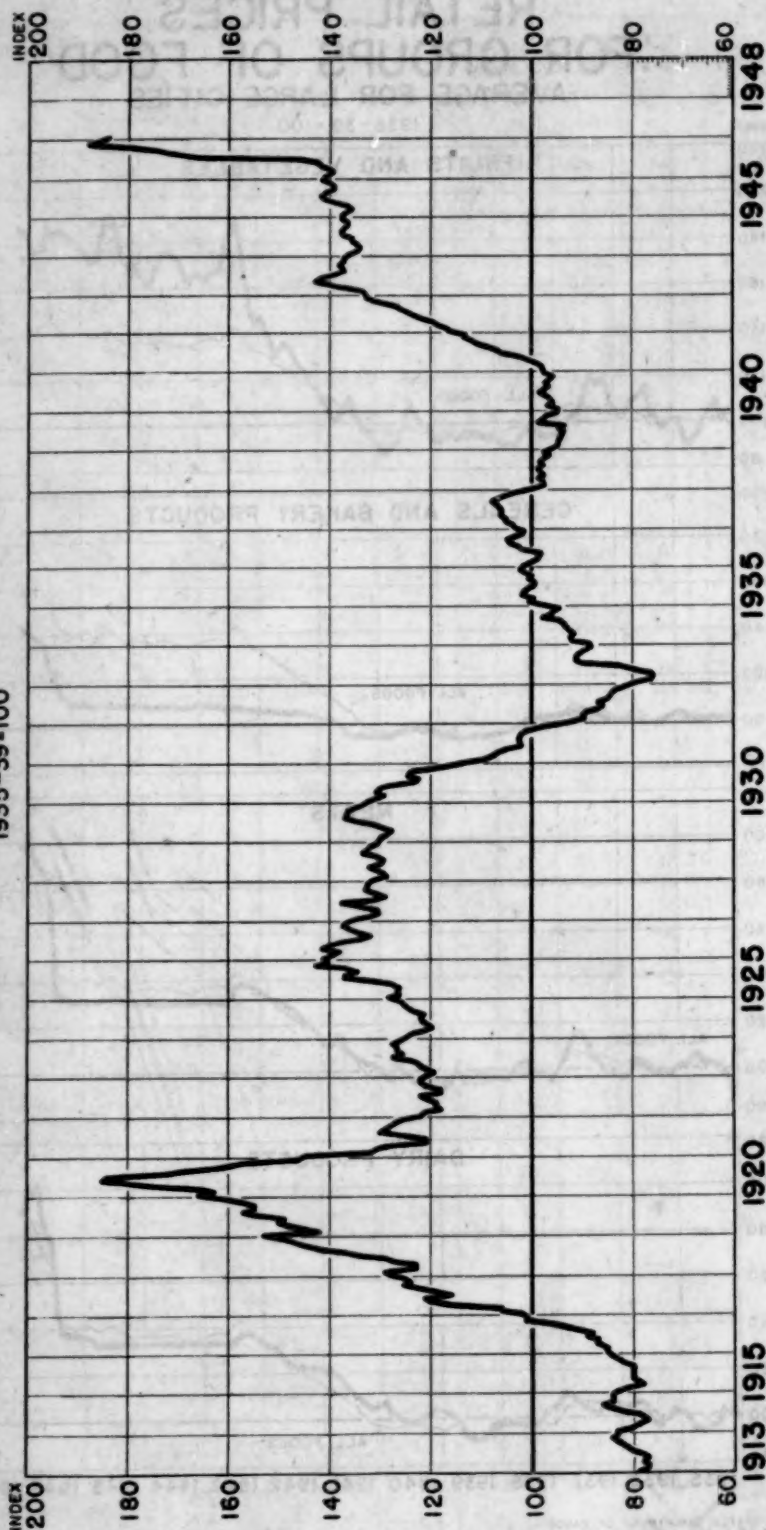
[1935-39=100]

Commodity group	Feb. 15 1947	Jan. 15 1947	Feb. 15 1946	Aug. 15 1945	Jan. 15 1941	Aug. 15 1939
	This month	Last month	Year ago	VJ-day	Wage base date ²	Month before war in Europe
All foods.....	182.3	183.8	139.6	140.9	97.8	93.5
Cereals and bakery products.....	144.1	143.4	109.8	109.1	94.9	93.4
Meats.....	196.7	199.0	131.3	131.8	101.1	95.7
Beef and veal.....	190.0	190.9	118.3	118.5	109.4	99.6
Pork.....	191.6	190.8	112.6	112.6	86.1	88.0
Lamb.....	204.3	205.3	136.9	136.4	98.7	98.8
Chickens.....	176.5	185.8	151.2	157.3	97.2	94.6
Fish, fresh and canned.....	258.7	271.3	226.9	217.8	118.7	99.6
Dairy products.....	183.2	190.1	136.6	133.4	105.1	93.1
Eggs.....	169.9	181.7	144.2	171.4	97.4	90.7
Fruits and vegetables.....	191.7	187.9	181.1	183.5	93.3	92.4
Fresh.....	189.3	184.1	193.0	196.2	93.4	92.8
Canned.....	172.6	173.6	130.9	130.3	91.4	91.6
Dried.....	269.9	269.2	169.8	168.6	99.6	90.3
Beverages.....	182.8	178.3	124.9	124.7	90.9	94.9
Fats and oils.....	201.3	201.9	125.4	124.0	80.3	84.5
Sugar and sweets.....	178.1	176.2	126.9	126.6	95.3	95.6

¹ Aggregate costs of 61 foods in each city, weighted to represent total purchases by families of wage earners and lower-salaried workers, have been combined with the use of population weights.

² The wage formulas apply to Jan. 1, 1941. Jan. 15, 1941, is the nearest date for which data on retail prices of individual foods have been computed.

RETAIL PRICES OF FOOD TO CITY WORKERS AVERAGE FOR LARGE CITIES 1935-39=100



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

lected

modity

Aug. 15,
1939, to
Feb. 15,
1947

+93.0

+54.3
+105.5
+90.8
+117.7
+106.8
+86.6
+159.7
+96.8
+87.3
+107.5
+104.0
+88.4
+108.9
+92.6
+138.2
+86.3

modity

Aug. 15
1939

Month
before
war in
Europe

93.5

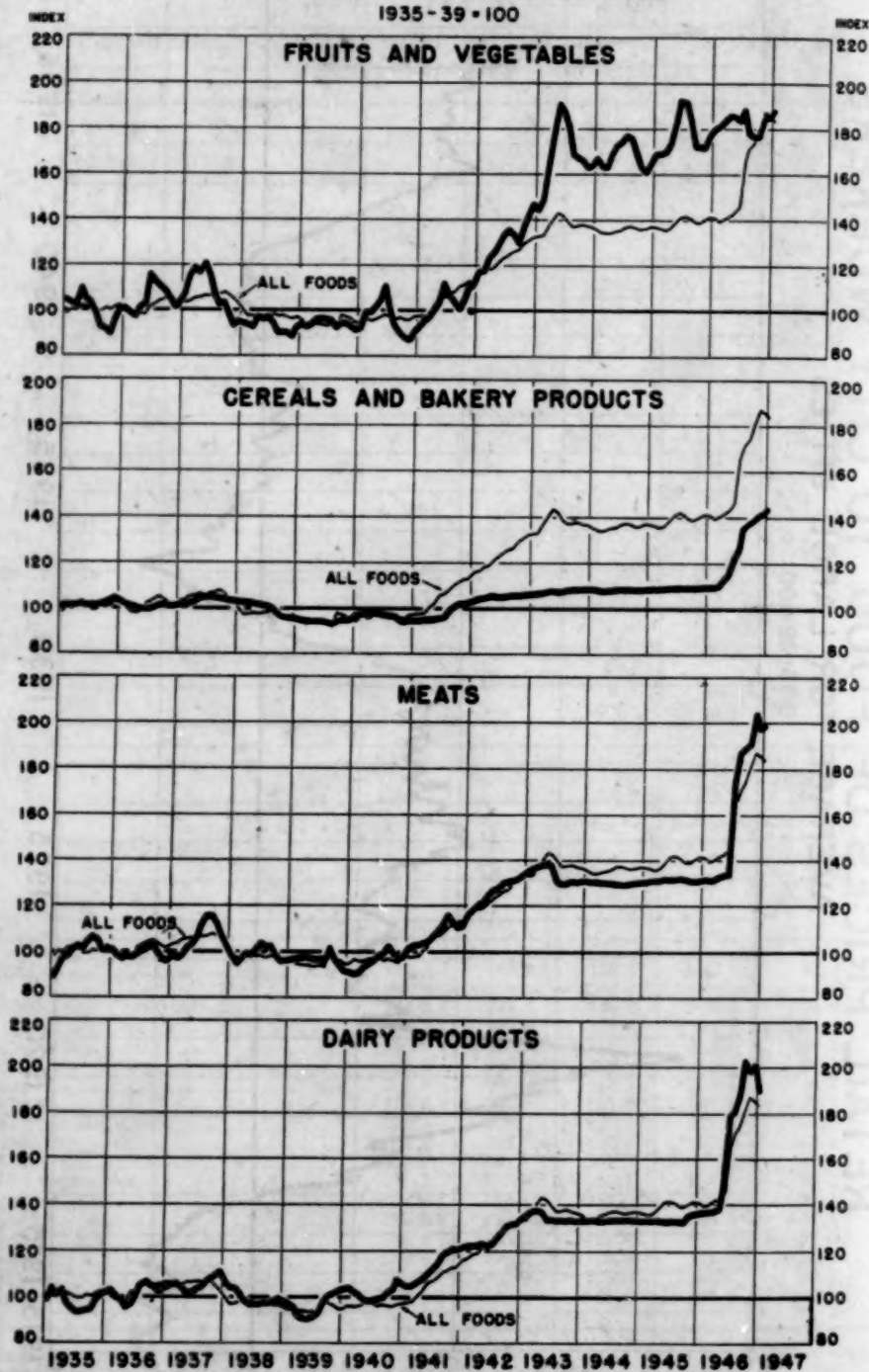
93.4
95.7
99.6
88.0
98.8
94.6
99.6
93.1
90.7
92.4
92.8
91.6
90.3
94.9
84.5
95.6

earnings

il prices

RETAIL PRICES FOR GROUPS OF FOOD AVERAGE FOR LARGE CITIES

1935-39=100



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

TABLE 3.—Average retail prices of 70 foods in 56 large cities combined, February 1947, compared with earlier months

Article	Feb. 15 1947	Jan. 15 1947	Feb. 15 1946	Aug. 15 1945	Jan. 15 1941	Aug. 15 1939
	This month	Last month	Year ago	VJ- day	Wage base date ¹	Month before war in Europe
Cereals and bakery products:						
Cereals:	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Flour, wheat.....5 pounds.....	42.5	41.7	32.0	32.2	20.7	17.9
Macaroni.....pound.....	19.2	19.1	15.6	15.8	13.8	14.0
Cornflakes.....11 ounces.....	12.1	12.1	9.3	9.2	9.8	9.7
Corn meal.....pound.....	9.0	9.1	6.5	6.4	4.2	4.0
Rice ²do.....	17.0	16.9	12.9	13.0	7.9	7.5
Rolled oats.....20 ounces.....	13.4	13.4	13.0	13.0	8.9	8.9
Bakery products:						
Bread, white.....pound.....	11.7	11.6	8.9	8.8	7.8	7.8
Bread, whole-wheat.....do.....	12.6	12.6	9.7	9.7	8.7	8.8
Bread, rye.....do.....	13.5	13.4	9.9	9.9	9.0	9.2
Vanilla cookies.....do.....	38.6	38.8	28.6	28.6	25.1	(³)
Soda crackers.....do.....	24.6	24.6	18.6	18.9	15.0	14.8
Meats:						
Beef:						
Round steak.....do.....	65.8	66.0	40.8	40.9	38.6	36.4
Rib roast.....do.....	55.4	55.9	33.3	33.0	31.5	28.9
Chuck roast.....do.....	45.1	46.6	28.5	28.4	25.2	22.5
Liver.....do.....	53.6	53.2	37.4	36.9	(³)	(³)
Hamburger.....do.....	40.2	41.1	27.2	27.4	(³)	(³)
Veal:						
Cutlets.....do.....	75.2	72.7	44.6	44.4	45.2	42.5
Roast, boned and rolled ²do.....	56.0	54.2	34.7	34.3	(³)	(³)
Pork:						
Chops.....do.....	63.2	60.0	37.0	37.2	29.1	30.9
Bacon, sliced.....do.....	68.9	71.5	41.0	41.2	30.1	30.4
Ham, sliced.....do.....	83.6	83.1	50.3	49.4	45.1	46.4
Ham, whole.....do.....	61.7	63.2	35.7	34.5	26.2	27.4
Salt pork.....do.....	38.7	42.4	22.2	22.0	16.7	15.4
Sausage ²do.....	50.0	52.4	38.8	38.7	(³)	(³)
Lamb:						
Leg.....do.....	60.8	61.6	40.4	40.5	27.8	27.6
Rib chops.....do.....	67.6	67.4	46.0	46.0	35.0	36.7
Poultry: Roasting chickensdo.....	53.3	56.1	45.8	47.6	31.1	30.9
Fish:						
Fish (fresh, frozen).....do.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Salmon, pink.....16-ounce can.....	36.6	35.1	24.8	23.4	15.7	12.8
Salmon, red ²do.....	58.8	59.0	42.9	39.7	26.4	23.1
Dairy products:						
Butter.....pound.....	76.2	79.5	54.7	49.9	38.0	30.7
Cheese.....do.....	61.4	63.5	37.3	35.7	27.0	24.7
Milk, fresh (delivered).....quart.....	19.4	20.1	15.4	15.6	13.0	12.0
Milk, fresh (store).....do.....	18.6	19.3	14.5	14.5	11.9	11.0
Milk, evaporated.....14½-ounce can.....	13.9	14.0	9.9	10.1	7.1	6.7
Eggs: Eggs, fresh.....dozen.....	58.9	63.0	50.1	60.6	34.9	32.0
Fruits and vegetables:						
Fresh fruits:						
Apples.....pound.....	12.9	12.5	14.5	13.1	5.2	4.4
Bananas.....do.....	14.8	14.7	10.9	10.5	6.6	6.1
Oranges.....dozen.....	37.9	37.8	44.9	51.3	27.3	31.5
Grapefruit ²each.....	7.6	7.9	8.3	11.0	(³)	(³)
Fresh vegetables:						
Beans, green.....pound.....	25.3	18.7	21.1	18.7	14.0	7.2
Cabbage.....do.....	6.6	6.3	6.3	6.0	3.4	3.9
Carrots.....bunch.....	9.0	10.6	8.7	9.1	6.0	4.6
Lettuce.....head.....	15.4	13.6	11.0	12.5	8.4	8.4
Onions.....pound.....	5.0	4.9	8.4	7.9 ⁴	3.6	3.6
Potatoes.....15 pounds.....	64.0	63.8	72.2	73.8	29.2	34.4
Spinach.....pound.....	13.7	14.0	12.7	11.6	7.3	7.8
Sweetpotatoes.....do.....	10.4	10.4	10.4	11.4	5.0	5.5
Canned fruits:						
Peaches.....No. 2½ can.....	32.2	32.2	28.1	27.2	16.5	17.1
Pineapple.....do.....	32.1	32.2	27.5	26.3	20.9	21.0
Grapefruit juice.....No. 2 can.....	11.2	11.8	14.1	14.4	(³)	(³)
Canned vegetables:						
Beans, green.....do.....	16.0	15.8	13.6	13.2	10.0	10.0
Corn.....do.....	18.1	18.1	14.8	14.8	10.7	10.4
Peas.....do.....	15.9	15.8	13.8	13.2	13.2	13.6
Tomatoes.....do.....	21.1	21.3	13.1	12.2	8.4	8.6
Soup, vegetable ²11-ounce can.....	14.3	14.3	13.3	13.2	(³)	(³)
Dried fruits: Prunes.....pound.....	26.1	25.7	17.8	17.4	9.6	8.8
Dried vegetables: Navy beans.....do.....	21.0	21.2	11.7	11.5	6.5	5.8

See footnotes at end of table.

TABLE 3.—Average retail prices of 70 foods in 56 large cities combined, February 1947 compared with earlier months—Continued

Article	Feb. 15 1947	Jan. 15 1947	Feb. 15 1946	Aug. 15 1945	Jan. 15 1941	Aug. 15 1939
	This month	Last month	Year ago	VJ-day	Wage base date ¹	Month before war in Europe
Beverages:	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Coffee.....pound.....	45.9	44.7	30.4	30.5	20.7	22.3
Tea..... $\frac{1}{4}$ pound.....	24.1	24.1	24.0	24.2	17.6	17.2
Cocon ² $\frac{1}{4}$ pound.....	13.4	12.9	10.5	10.4	9.1	8.6
Fats and oils:						
Lard.....pound.....	32.4	32.5	18.6	18.8	9.3	9.9
Shortening other than lard:						
In cartons.....do.....	37.1	36.9	20.2	20.0	11.3	11.7
In other containers.....do.....	44.3	44.3	24.8	24.5	18.3	20.2
Salad dressing.....pint.....	39.3	39.5	27.9	24.2	20.1	(³)
Oleomargarine.....pound.....	41.9	42.3	24.3	23.9	15.6	16.5
Peanut butter.....do.....	35.4	35.5	32.7	28.6	17.9	17.9
Oil, cooking or salad ²pint.....	48.3	48.7	30.8	30.5	(³)	(³)
Sugar and sweets:						
Sugar.....pound.....	9.6	9.5	6.7	6.7	5.1	5.2
Corn sirup.....24 ounces.....	18.6	18.8	15.8	15.8	13.6	13.7
Molasses ²16 fluid ounces.....	21.0	20.9	20.2	20.4	17.3	17.6

¹ The wage formulas apply to Jan. 1, 1941. Jan. 15, 1941, is the nearest date for which data on retail prices of individual foods have been computed.

² Not included in index.

³ Not priced.

⁴ Composite price not computed.

TABLE 4.—Indexes of average retail prices of all foods, by cities,¹ on specified dates [1935-39=100]

City	Feb. 15 1947	Jan. 15 1947	Feb. 15 1946	Aug. 15 1945	Jan. 15 1941	Aug. 15 1939
	This month	Last month	Year ago	VJ-day	Wage base date ²	Month before war in Europe
United States.....	182.3	183.8	139.6	140.9	97.8	93.5
Atlanta, Ga.....	187.5	187.5	139.4	142.1	94.3	92.5
Baltimore, Md.....	189.7	191.4	145.6	149.1	97.9	94.7
Birmingham, Ala.....	193.5	196.0	142.9	147.5	96.0	90.7
Boston, Mass.....	172.7	177.6	133.3	135.7	95.2	93.5
Bridgeport, Conn.....	178.5	180.0	135.6	137.4	96.5	93.2
Buffalo, N. Y.....	173.3	175.9	136.1	138.4	100.2	94.5
Butte, Mont.....	175.1	174.9	135.2	138.7	98.7	94.1
Cedar Rapids, Iowa ³	190.0	188.6	141.9	145.3	95.9	-----
Charleston, S. C.....	181.5	180.5	138.4	139.7	95.9	95.1
Chicago, Ill.....	183.2	184.5	138.6	139.2	98.2	92.3
Cincinnati, Ohio.....	182.8	182.4	136.1	140.0	96.5	90.4
Cleveland, Ohio.....	186.9	189.1	142.7	145.6	99.2	93.6
Columbus, Ohio.....	170.0	171.6	131.1	134.0	93.4	88.1
Dallas, Tex.....	186.5	186.3	⁴ 137.8	138.9	92.6	91.7
Denver, Colo.....	185.7	185.0	139.5	139.3	94.8	92.7
Detroit, Mich.....	175.1	176.5	136.7	138.4	97.0	90.6
Fall River, Mass.....	178.2	180.9	132.1	134.1	97.5	95.4
Houston, Tex.....	190.6	192.5	139.3	141.2	102.6	97.8
Indianapolis, Ind.....	179.9	180.0	135.6	137.7	98.2	90.7
Jackson, Miss. ³	199.0	199.1	146.6	151.2	105.3	-----
Jacksonville, Fla.....	189.3	190.3	145.8	152.0	98.8	95.8
Kansas City, Mo.....	176.6	175.4	132.6	135.4	92.4	91.5
Knoxville, Tenn. ³	213.9	216.4	158.1	160.6	97.1	-----
Little Rock, Ark.....	182.9	182.4	138.1	140.4	95.6	94.0
Los Angeles, Calif.....	194.1	194.3	148.4	145.9	101.8	94.6

See footnotes at end of table.

TABLE 4.—Indexes of average retail prices of all foods, by cities,¹ on specified dates—Con.

[1935-39=100]

City	Feb. 15 1947	Jan. 15 1947	Feb. 15 1946	Aug. 15 1945	Jan. 15 1941	Aug. 15 1939
	This month	Last month	Year ago	VJ-day	Wage base date ²	Month before war in Europe
Louisville, Ky.	176.6	177.7	132.7	135.0	95.5	92.1
Manchester, N. H.	177.5	183.6	135.8	136.4	96.6	94.9
Memphis, Tenn.	198.6	200.2	149.2	150.9	94.2	89.7
Milwaukee, Wis.	180.1	178.0	136.3	139.4	95.9	91.1
Minneapolis, Minn.	174.6	174.0	132.5	133.2	99.0	95.0
Mobile, Ala.	188.7	189.2	147.9	152.3	97.9	95.5
Newark, N. J.	176.5	178.5	141.7	143.4	98.8	95.6
New Haven, Conn.	174.1	177.3	135.2	137.2	95.7	93.7
New Orleans, La.	199.1	199.7	151.1	156.5	101.9	97.6
New York, N. Y.	182.1	183.5	141.8	141.7	99.5	95.8
Norfolk, Va.	191.6	191.3	145.4	146.1	95.8	93.6
Omaha, Nebr.	178.3	178.2	131.8	131.8	97.9	92.3
Peoria, Ill.	183.9	187.1	144.6	145.9	99.0	93.4
Philadelphia, Pa.	177.2	179.7	137.6	138.9	95.0	93.0
Pittsburgh, Pa.	185.6	185.2	140.4	141.3	98.0	92.5
Portland, Maine	174.3	170.8	133.7	135.7	95.3	95.0
Portland, Oreg.	191.2	192.8	148.7	150.9	101.7	96.1
Providence, R. I.	180.5	183.8	139.1	141.6	96.3	93.7
Richmond, Va.	182.1	181.5	137.5	138.3	93.7	92.2
Rochester, N. Y.	174.3	177.4	134.4	137.8	99.9	92.3
St. Louis, Mo.	188.4	187.4	142.3	144.0	99.2	93.8
St. Paul, Minn.	172.3	173.1	131.0	132.1	98.6	94.3
Salt Lake City, Utah	184.1	183.9	141.7	143.9	97.5 ³	94.6
San Francisco, Calif.	195.4	200.6	147.7	147.1	99.6	93.8
Savannah, Ga.	203.1	203.8	155.6	157.5	100.5	96.7
Scranton, Pa.	182.6	180.9	138.8	141.3	97.5	92.1
Seattle, Wash.	187.4	189.6	146.1	145.8	101.0	94.5
Springfield, Ill.	194.5	193.4	143.9	146.1	96.2	94.1
Washington, D. C.	181.3	183.7	141.0	141.7	97.7	94.1
Wichita, Kans. ⁴	190.1	193.3	147.6	149.8	97.2	-----
Winston-Salem, N. C. ¹	189.6	192.6	140.3	143.4	93.7	-----

¹ Aggregate costs of 61 foods in each city, weighted to represent total purchases by families of wage earners and lower-salaried workers, have been combined for the United States with the use of population weights.

² The wage formulas apply to Jan. 1, 1941. Jan. 15, 1941, is the nearest date for which data on retail prices of individual foods have been computed.

³ June 1940=100.

⁴ Revised.

TABLE 5.—Indexes of retail food prices in 56 large cities combined, 1913 to February 1947

[1935-39=100]

Year	All- foods index	Year	All- foods index	Year and month	All- foods index	Year and month	All- foods index
1913	79.9	1926	137.4	1939	95.2	April	141.7
1914	81.8	1927	132.3	1940	96.6	May	142.6
1915	80.9	1928	130.8	1941	105.5	June	145.6
1916	90.8	1929	132.5	1942	123.9	July	165.7
1917	116.9	1930	126.0	1943	138.0	August	171.2
1918	134.4	1931	103.9	1944	136.1	September	174.1
1919	149.8	1932	86.5	1945	139.1	October	180.0
1920	168.8	1933	84.1	1946	159.6	November	187.7
1921	128.3	1934	93.7			December	185.9
1922	119.9	1935	100.4	1946			
1923	124.0	1936	101.3	January	141.0	1947	
1924	122.8	1937	105.3	February	139.6	January	183.8
1925	132.9	1938	97.8	March	140.1	February	182.3

Wholesale Prices in February 1947

SUBSTANTIAL PRICE INCREASES for most agricultural commodities were chiefly responsible for a rise of 2.2 percent in average primary market prices in February 1947. Industrial prices continued their steady advance. The Bureau of Labor Statistics general index of commodity prices in primary markets reached 144.6 percent of the 1926 average, the highest level since September 1920 and 13.5 percent below the May 1920 peak. On the average, prices were 28.1 percent higher than in June 1946 and 34.3 percent above a year ago.

Average prices of all commodities in February 1947 were 93 percent above their level at the start of the war, with the sharpest advances in farm products and foods (179 percent and 141 percent higher, respectively). Prices of textile products and building materials were about double those in August 1939; prices of hides and leather rose 87½ percent; chemicals and allied products, nearly 75 percent; metals and metal products, housefurnishing goods, and miscellaneous commodities, about 50 percent; and fuel and lighting materials, 35 percent.

Prices of farm products and foods rose 3.3 percent and 3.7 percent, respectively, during February, reversing the January declines. Increases for nonagricultural commodities were led by building materials which rose 3.0 percent. Housefurnishing goods and textile products increased about 1 percent, and chemicals and allied products, metals and metal products, fuel and lighting materials, and miscellaneous commodities increased less than 1 percent. With a decrease of 0.7 percent, hides and leather products was the only major group to show a decline during the month. As a group, prices of all commodities other than farm products and foods rose 0.8 percent, reaching a level 26.9 percent above February 1946 and 60.5 percent above August 1939.

The substantial rise of 3.3 percent raised the group index for farm products to 170.4 percent of the 1926 average, slightly higher than its previous all-time peak in January 1920. Demand continued high and bad weather throughout the country severely reduced shipments of most agricultural commodities. The supply situation was aggravated by the continuing shortage of box cars and crop damage resulting from the early February freeze. Demand, particularly for grains, was stimulated by increased buying for export. Rye quotations rose 11½ percent, reaching an all-time high; corn and wheat rose about 5½ percent. Supplies of hogs, shipped to a large extent by motor truck, were especially limited and prices rose more than 12 percent to a new peak. Prices of beef animals moved downward despite light shipments, reflecting resistance to high meat prices. Prices of some fruits and vegetables, particularly citrus fruits, advanced sharply because of light supplies resulting from the freeze in

Florida. Spot quotations for raw cotton increased nearly 5 percent as mill consumption continued well above normal levels. The Commodity Credit Corporation's selling price for domestic wools was raised to meet parity requirements but prices of some South American wools declined with weak demand.

Important in the average rise of 3.7 percent for foods were sharp advances in meat prices, especially pork and veal, which continued scarce during the month. Beef and mutton prices declined. Prices of cereal products averaged 1.0 percent higher and scarcity caused substantially higher prices for several other foods, including vegetable and animal fats and oils, cocoa beans, and coffee. As a group dairy products declined 1.7 percent in price. There were seasonal decreases in fluid milk prices and lower prices for cheese and powdered and evaporated milk. Short supplies, due to bad weather, caused an advance in butter prices.

The average decline of 0.7 percent for hides and leather products was caused by substantial decreases for goatskins, shearlings, and steer hides, and some leather products. However, prices of cow hides and calfskins rose again in February, reflecting light slaughterings and release of hides for export. Average prices of shoes were slightly higher.

Textile prices rose 1.0 percent on the average. Prices of cotton goods and cotton clothing, worsted fabrics, and woolen apparel increased as a result of higher raw fiber costs and increased wage rates, as well as continuing heavy demand. Higher costs also caused increases for rayon yarn and staple fiber. Raw silk prices dropped more than 20 percent as the United States Commercial Company lowered its prices to stimulate lagging demand. Raw jute and Mexican sisal prices advanced but burlap and Manila hemp prices were lower.

Fuel and lighting materials increased 0.2 percent, with coke prices up because of higher production costs. Fractional advances occurred in prices of anthracite and bituminous coal and petroleum products.

Metals and metal products rose 0.4 percent as shortages of primary metals remained acute. Copper and lead quotations were higher, and prices for a number of steel products advanced because of higher costs. Quotations for bar silver and mercury declined.

Substantially higher prices for lumber and increases in certain other building materials were responsible for the 3.0 percent rise for the group as a whole. Some Douglas fir lumber increased as much as 20 percent and there also were sizable advances for southern pine and western pine. Higher metal costs brought increased prices for lead and zinc pigments, iron oxide, and some builders' hardware. Rosin quotations were up sharply following removal of export controls.

Higher prices for millwork were due to the continuing shortage. Delivered prices of cement were raised partly because of increased freight rates.

The rise of 0.9 percent for chemicals and allied products reflected higher raw material costs, shortage of containers, and limited supplies. Among industrial chemicals, price increases occurred for tanning extracts, coal-tar products, tribasic phosphate, and dynamite. Silver nitrate prices dropped with lower silver costs and tank car prices of muriatic acid declined. Shortages brought further price increases for several inedible oils. There also were price rises for castor oil, ether, and natural menthol. Prices for mixed fertilizer moved upward, but organic fertilizer materials declined.

Miscellaneous commodities increased 0.5 percent on the average. Average prices of crude rubber in January were higher than in December, reflecting the December increase in selling prices by the Reconstruction Finance Corporation to cover purchase costs. Paper and pulp prices advanced as supplies remained short, despite a high level of production, and demand continued strong. There also were increases for other miscellaneous commodities including lubricating oils, storage batteries, shipping cases, tobacco, and paraffin. Average prices of cattle feed were lower, as cottonseed and soybean meal dropped sharply; bran and middlings were higher.

TABLE 1.—*Indexes of wholesale prices by groups and subgroups of commodities February 1947, compared with previous months*

Groups and subgroups	Indexes (1926=100)				Percent changes to February 1947 from—		
	February 1947	January 1947	February 1946	August 1939	January 1947	February 1946	August 1939
All commodities.....	144.6	141.5	107.7	75.0	+2.2	+34.3	+92.8
Farm products.....	170.4	165.0	130.8	61.0	+3.3	+30.3	+179.3
Grains.....	171.1	162.6	133.9	51.5	+5.2	+27.8	+232.2
Livestock and poultry.....	201.5	189.6	132.7	66.0	+6.3	+51.8	+206.3
Other farm products.....	150.5	149.7	127.9	60.1	+5	+17.7	+150.4
Foods.....	162.0	156.2	107.8	67.2	+3.7	+50.3	+141.1
Dairy products.....	161.8	164.6	115.8	67.9	-1.7	+39.7	+138.3
Cereal products.....	141.3	139.9	96.1	71.9	+1.0	+47.0	+96.5
Fruits and vegetables.....	134.2	131.6	127.5	58.5	+2.0	+5.3	+129.4
Meats.....	199.5	183.4	108.1	73.7	+8.8	+84.6	+170.7
Other foods.....	146.0	141.1	96.5	60.3	+3.5	+51.3	+142.1
Hides and leather products.....	173.8	175.1	119.6	92.7	-.7	+45.3	+87.5
Shoes.....	171.5	170.6	128.2	100.8	+5	+33.8	+70.1
Hides and skins.....	191.4	198.5	117.6	77.2	-3.6	+62.8	+147.9
Leather.....	181.1	181.6	103.9	84.0	-.3	+74.3	+115.6
Other leather products.....	137.1	140.3	115.2	97.1	-2.3	+19.0	+41.2
Textile products.....	138.0	136.6	102.2	67.8	+1.0	+35.0	+103.5
Clothing.....	132.7	132.4	109.4	81.5	+2	+21.3	+62.8
Cotton goods.....	193.7	184.6	125.8	65.5	+4.9	+54.0	+195.7
Hosiery and underwear.....	100.0	99.3	75.3	61.5	+7	+32.8	+62.6
Rayon.....	37.0	33.8	30.2	28.5	+9.5	+22.5	+29.8
Silk.....	80.2	101.2	---	44.3	-20.8	---	+81.0
Woolen and worsted goods.....	121.9	120.8	112.7	75.5	+9	+8.2	+61.5
Other textile products.....	170.1	169.9	102.0	63.7	+1	+66.8	+167.0

See footnotes at end of table.

TABLE 1.—Indexes of wholesale prices by groups and subgroups of commodities February 1947, compared with previous months—Continued

Groups and subgroups	Indexes (1926=100)				Percent changes to February 1947 from—		
	February 1947	January 1947	February 1946	August 1939	January 1947	February 1946	August 1939
Fuel and lighting materials.....	97.9	97.7	85.1	72.6	+0.2	+15.0	+34.8
Anthracite.....	114.8	114.7	104.0	72.1	+1.1	+10.4	+59.2
Bituminous coal.....	143.3	142.6	125.1	96.0	+5	+14.5	+49.3
Coke.....	155.1	152.5	134.9	104.2	+1.7	+15.0	+48.8
Electricity.....	(2)	(2)	71.3	75.8			
Gas.....	(2)	80.8	79.1	86.7			
Petroleum and products.....	76.6	76.5	61.6	51.7	+1	+24.4	+48.2
Metals and metal products.....	138.6	138.0	106.6	93.2	+4	+30.0	+48.7
Agricultural implements.....	117.6	117.5	98.1	93.5	+1	+19.9	+25.8
Farm machinery.....	119.0	119.0	99.2	94.7	0	+20.0	+25.7
Iron and steel.....	125.0	123.9	103.3	95.1	+9	+21.0	+31.4
Motor vehicles.....	151.2	151.3	112.8	92.5	-1	+34.0	+63.5
Nonferrous metals.....	131.3	130.5	85.7	74.6	+6	+53.2	+76.0
Plumbing and heating.....	117.1	117.0	95.1	79.3	+1	+23.1	+47.7
Building materials.....	174.8	169.7	120.9	89.6	+3.0	+44.6	+95.1
Brick and tile.....	132.3	132.2	116.9	90.5	+1	+13.2	+46.2
Cement.....	109.9	108.3	101.5	91.3	+1.5	+8.3	+20.4
Lumber.....	263.6	249.9	160.1	90.1	+5.5	+64.6	+192.6
Paint and paint materials.....	173.9	171.2	107.8	82.1	+1.6	+61.3	+111.8
Plumbing and heating.....	117.1	117.0	95.1	79.3	+1	+23.1	+47.7
Structural steel.....	127.7	127.7	113.7	107.3	0	+12.3	+19.0
Other building materials.....	141.5	139.0	107.2	89.5	+1.8	+32.0	+58.1
Chemicals and allied products.....	129.3	128.1	95.9	74.2	+9	+34.8	+74.3
Chemicals.....	113.8	112.7	97.0	83.8	+1.0	+17.3	+35.8
Drugs and pharmaceuticals.....	182.5	181.7	111.5	77.1	+4	+63.7	+136.7
Fertilizer materials.....	99.2	99.9	81.9	65.5	-7	+21.1	+51.5
Mixed fertilizers.....	96.3	95.5	86.6	73.1	+8	+11.2	+31.7
Oils and fats.....	214.3	210.6	101.8	40.6	+1.8	+110.5	+127.8
Housefurnishing goods.....	124.6	123.3	106.5	85.6	+1.1	+17.0	+45.6
Furnishings.....	129.6	128.4	110.1	90.0	+9	+17.7	+44.0
Furniture.....	119.5	118.2	102.9	81.1	+1.1	+16.1	+47.3
Miscellaneous.....	110.9	110.3	95.6	73.3	+5	+16.0	+51.3
Automobile tires and tubes.....	73.0	73.0	73.0	60.5	0	0	+20.7
Cattle feed.....	178.6	181.7	159.6	68.4	-1.7	+11.9	+161.1
Paper and pulp.....	143.4	141.9	113.7	80.0	+1.1	+26.1	+79.2
Rubber, crude.....	52.9	51.2	46.2	34.9	+3.3	+14.5	+51.6
Other miscellaneous.....	118.8	118.1	98.9	81.3	+6	+20.1	+46.1
Raw materials.....	154.9	152.1	118.9	66.5	+1.8	+30.3	+132.9
Semimanufactured products.....	142.1	138.8	98.8	74.5	+2.4	+43.8	+90.7
Manufactured products.....	139.9	136.7	103.4	79.1	+2.3	+35.3	+76.9
All commodities other than farm products.....	138.8	136.1	102.5	77.9	+2.0	+35.4	+78.2
All commodities other than farm products and foods.....	128.6	127.6	101.3	80.1	+8	+26.9	+60.5

¹ Includes current motor vehicle prices.

Motor vehicles.—The rate of production of motor vehicles in October 1946 exceeded the monthly average rate of civilian production in 1941, and in accordance with the announcement made in the September release the Bureau introduced current prices for motor vehicles in the October calculations. During the war, motor vehicles were not produced for general civilian sales and the Bureau carried April 1942 prices forward in each computation through September 1946.

If April 1942 prices of motor vehicles had been used after September 1946, the indexes for the groups of which motor vehicles is a component would have been:

Indexes (1926=100)
February January December

All commodities.....	142.6	139.5	139.0
Metals and metal products.....	124.3	123.7	120.5
Manufactured products.....	136.7	133.5	132.5
All commodities other than farm products.....	136.3	133.7	132.4
All commodities other than farm products and foods.....	125.5	124.4	121.0

These special indexes will be published as long as the need for them continues.

² Not available.

Index Numbers by Commodity Groups, 1926 to February 1947

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1946, and by months from February 1946 to February 1947 are shown in table 2.

TABLE 2.—*Index numbers of wholesale prices by groups of commodities*

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous	All commodities
1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929.....	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	95.3
1932.....	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	64.8
1933.....	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	65.9
1936.....	80.9	82.1	95.4	71.5	76.2	87.0	86.7	78.7	81.7	70.5	80.8
1937.....	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	86.3
1938.....	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.0	86.8	73.3	78.6
1939.....	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	77.1
1940.....	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	78.6
1941.....	82.4	82.7	108.3	84.8	76.2	99.4	103.2	84.4	94.3	82.0	87.3
1942.....	105.9	99.6	117.7	96.9	78.5	103.8	110.2	95.5	102.4	89.7	98.8
1943.....	122.6	106.6	117.5	97.4	80.8	103.8	111.4	94.9	102.7	92.2	103.1
1944.....	123.3	104.9	116.7	98.4	83.0	103.8	115.5	95.2	104.3	93.6	104.0
1945.....	128.2	106.2	118.1	100.1	84.0	104.7	117.8	95.2	104.5	94.7	105.8
1946.....	148.9	130.7	137.2	116.3	90.1	115.5	132.6	101.4	111.6	100.3	121.1
<i>1946</i>											
February..	130.8	107.8	119.6	102.2	85.1	106.6	120.9	95.9	106.5	95.6	107.7
March.....	133.4	109.4	119.8	104.7	85.0	108.4	124.9	96.0	106.9	95.6	108.9
April.....	135.4	110.8	119.8	107.9	86.1	108.8	126.5	96.1	107.5	95.7	110.2
May.....	137.5	111.5	120.4	108.8	86.1	109.4	127.8	96.5	108.3	97.0	111.0
June.....	140.1	112.9	122.4	109.2	87.8	112.2	129.9	96.4	110.4	98.5	112.9
July.....	157.0	140.2	141.2	118.1	90.3	113.3	132.1	99.3	111.9	101.3	124.7
August.....	161.0	149.0	138.9	124.0	94.4	114.0	132.7	98.4	112.6	102.0	129.1
September..	154.3	131.9	141.6	125.7	94.3	114.2	133.8	98.4	113.6	102.1	124.0
October.....	165.3	157.9	142.4	128.6	94.2	125.8	134.8	99.9	115.3	104.0	134.1
November..	169.8	165.4	172.5	131.3	94.5	130.2	145.5	118.9	118.2	106.5	139.7
December..	168.1	160.1	176.7	134.7	96.1	134.7	157.8	125.7	120.2	108.9	140.9
<i>1947</i>											
January....	165.0	156.2	175.1	136.6	97.7	138.0	169.7	128.1	123.3	110.3	141.5
February..	170.4	162.0	173.8	138.0	97.9	138.6	174.8	129.3	124.6	110.9	144.6

The price trend for specified years and months since 1926 is shown in table 3 for the following groups of commodities: Raw materials, semimanufactured articles, manufactured products, commodities other than farm products, and commodities other than farm products and foods. The list of commodities included under the classifications "Raw materials," "Semimanufactured articles," and "Manufactured products" was shown on pages 6 and 7 of Wholesale Prices, 1944 (Bulletin No. 870).

TABLE 3.—Index numbers of wholesale prices by special groups of commodities

[1926=100]

Year and month	Raw materials	Semi-manufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods	Year and month	Raw materials	Semi-manufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
1926.....	100.0	100.0	100.0	100.0	100.0	1946					
1929.....	97.5	93.9	94.5	93.3	91.6	February.....	118.9	98.8	103.4	102.5	101.3
1932.....	55.1	59.3	70.3	68.3	70.2	March.....	120.5	100.4	104.5	103.4	102.2
1933.....	56.5	65.4	70.5	69.0	71.2	April.....	122.2	101.1	105.5	104.5	103.3
1936.....	79.9	75.9	82.0	80.7	79.6	May.....	123.6	101.9	106.1	105.1	103.9
1937.....	84.8	85.3	87.2	86.2	85.3	June.....	126.3	105.7	107.3	106.7	105.6
1938.....	72.0	75.4	82.2	80.6	81.7	July.....	141.7	110.2	118.9	117.5	109.5
1939.....	70.2	77.0	80.4	79.5	81.3	August.....	145.7	111.9	123.9	121.9	111.6
1940.....	71.9	79.1	81.6	80.8	83.0	September.....	141.4	115.0	117.2	117.2	112.2
1941.....	83.5	86.9	89.1	88.3	89.0	October.....	148.7	118.2	129.6	127.1	115.8
1942.....	100.6	92.6	98.6	97.0	95.5	November.....	153.4	129.1	134.7	132.9	120.7
1943.....	112.1	92.9	100.1	98.7	96.9	December.....	153.2	136.2	135.7	134.8	124.7
1944.....	113.2	94.1	100.8	99.6	98.5	1947					
1945.....	116.8	95.9	101.8	100.8	99.7	January.....	152.1	138.8	136.7	136.1	127.6
1946.....	134.7	110.8	116.1	114.9	109.5	February.....	154.9	142.1	139.9	138.8	128.6

Weekly Fluctuations

Weekly changes in wholesale prices by groups of commodities during January and February 1947 are shown by the index numbers in table 4. These indexes are not averaged to obtain an index for the month but are computed only to indicate the fluctuations from week to week.

TABLE 4.—Weekly index numbers of wholesale prices by commodity groups, January and February 1947

[1926=100]

Commodity group	Feb. 22	Feb. 15	Feb. 8	Feb. 1	Jan. 25	Jan. 18	Jan. 11	Jan. 4
All commodities.....	144.3	143.1	141.7	140.3	140.3	140.8	140.0	139.1
Farm products.....	171.7	168.9	165.5	164.8	164.2	166.0	165.8	166.1
Foods.....	162.5	160.9	156.7	154.1	155.9	157.8	158.1	156.4
Hides and leather products.....	175.8	173.6	172.9	171.0	170.7	171.7	171.2	171.3
Textile products.....	135.4	135.5	137.7	135.8	135.7	135.7	133.2	133.5
Fuel and lighting materials.....	98.6	98.6	98.6	98.5	98.5	98.3	98.0	97.0
Metals and metal products.....	138.4	138.4	138.3	138.3	137.7	136.7	135.5	134.2
Building materials.....	172.6	172.8	170.6	168.6	165.5	164.5	158.1	156.1
Chemicals and allied products.....	129.2	128.3	127.6	127.8	127.4	127.1	126.8	126.6
Housefurnishing goods.....	125.3	123.0	123.0	122.8	122.5	122.4	121.4	120.9
Miscellaneous.....	110.7	110.0	110.0	109.9	110.0	109.5	109.0	107.8
Raw materials.....	156.2	154.3	153.1	152.6	152.1	153.3	153.1	153.1
Semimanufactured articles.....	141.3	141.7	141.3	139.5	138.6	137.8	135.9	135.1
Manufactured products.....	140.0	139.1	137.5	135.6	136.0	136.4	135.4	134.1
All commodities other than farm products.....	138.3	137.6	136.5	135.0	135.1	135.3	134.4	133.2
All commodities other than farm products and foods.....	128.3	128.1	128.1	127.5	127.0	126.6	125.0	124.1

Construction

Construction Activity, January–March 1947

The Housing Program

BUILDERS COMPLETED 59,800 new permanent nonfarm dwelling units in February 1947, and started 41,600. This makes the fourth successive month in which completions exceeded new units started, bringing down to 308,000 the number of homes under construction at the end of the month. New permanent family dwellings completed in January and February of this year totaled 119,100—over a fifth of the total of nearly 573,000 built since January 1946, when the emergency housing program got under way.

Two out of every three family-dwelling units (or equivalents) started and completed during the Veterans' Emergency Housing Program have been of the permanent type. Other types of dwellings included by the National Housing Agency in its report on the Program are units created through conversion of existing structures, trailers, and temporary re-use accommodations. With the tapering off of the Federal re-use program in recent months, the ratio of new permanent dwellings started has increased substantially until, in February, the proportion was four-fifths.

About 418,000 workers were employed at the site of new residential construction in February and 87 percent of them were working for private builders. These figures do not include workers employed at additions, alterations, and repair work nor those employed at the central office of construction contractors or in the shops of special trades contractors. New residential construction expenditures totaled 279 million dollars in February, 88 percent of which was privately financed. These estimates of employment and expenditures on new residential construction show a drop of 45,000 workers and 31 million dollars from January. However, preliminary estimates, based on increased permit valuations in January and February 1947 for residential building, show increased expenditures and employment for March (296 million dollars and 429,000 workers, respectively)—foreshadowing a rise in the volume of expenditures and employment on housing.

TABLE 1.—*Estimated number of family dwelling units or equivalent living accommodations¹ started and completed in nonfarm areas, January–December 1946 and January–February 1947²*

Year and month	Number of units					
	Started			Completed		
	Total	New permanent family dwellings	Other	Total	New permanent family dwellings	Other
1946: Total.....	1, 000, 700	³ 670, 900	⁴ 329, 800	657, 700	⁵ 453, 800	⁶ 203, 900
January.....	49, 600	36, 100	13, 500	24, 900	18, 700	6, 200
February.....	56, 100	43, 100	13, 000	24, 000	20, 300	7, 700
March.....	86, 400	60, 400	26, 000	31, 200	22, 600	8, 600
April.....	97, 600	66, 100	31, 500	35, 600	28, 400	9, 200
May.....	105, 600	67, 600	38, 000	39, 900	30, 300	9, 600
June.....	93, 500	63, 600	29, 900	46, 600	34, 900	11, 700
July.....	107, 900	64, 300	43, 600	54, 300	41, 000	13, 300
August.....	107, 100	64, 400	42, 700	59, 300	42, 200	17, 100
September.....	101, 000	57, 100	43, 900	81, 100	49, 800	31, 300
October.....	80, 000	58, 100	21, 900	85, 000	54, 500	30, 500
November.....	64, 000	49, 700	14, 300	81, 600	55, 100	26, 500
December.....	51, 900	40, 400	11, 500	90, 200	58, 000	32, 200
1947: First 2 months ⁷	103, 600	⁸ 83, 700	⁹ 19, 900	185, 500	¹⁰ 119, 100	¹¹ 66, 400
January.....	53, 500	42, 100	11, 400	94, 300	59, 300	35, 000
February.....	50, 100	41, 600	8, 500	91, 200	59, 800	31, 400

¹ Excludes military barracks.

² Source: Estimates for prefabricated units are from the National Housing Agency and Office of the Housing Expediter; privately financed conversion units and Federal re-use (moved and converted) units from the National Housing Agency; and trailers from the Bureau of the Census. All other estimates are from the U. S. Bureau of Labor Statistics.

³ Includes 8,027 permanent units started by New York City Housing Authority, and 37,200 prefabricated units.

⁴ Covers 64,500 privately financed converted units; 191,000 Federal (Mead-Lanham temporary housing program) re-use units (147,100 family dwellings and 43,900 family-equivalent dormitory units; a family-equivalent unit is defined as one family or two dormitory accommodations); 47,100 trailers; and 27,200 family-equivalent units financed by various State and local public bodies and educational institutions, which are not included under the Federal Mead-Lanham temporary housing program. Of units started in 1946, 600 family-equivalent dormitory units have been abandoned, but it is quite probable that work on these units will be reactivated.

⁵ Break-down not available for conventional and prefabricated units.

⁶ Covers 45,300 conversion units, 101,900 re-use units, of which 77,000 were family dwellings, 47,100 trailers, and 9,600 local emergency family-equivalent units.

⁷ Preliminary.

⁸ Includes 1,084 permanent units started by New York City Housing Authority. Break-down not available for conventional and prefabricated units.

⁹ Covers 4,300 conversion units, 10,200 trailers, 4,400 Federal (Mead-Lanham temporary housing program) re-use units, and 1,000 family-equivalent units financed by various States and local public bodies and educational institutions.

¹⁰ Covers 11,500 conversion units, 10,200 trailers, 41,800 Federal re-use equivalent units, and 2,900 local emergency family-equivalent units.

Total Construction Activity

Construction activity showed a marked upswing in March 1947, reversing the downtrend which began in the fall of 1946. Expenditures for construction increased by 61 million dollars in March (7 percent) to reach a total of 913 million dollars; an estimated 66,000 more construction workers were employed, bringing total construction employment to 1,605,000.

The dollar volume of residential building (including minor building repairs) rose in March to 332 million dollars—an increase of 20 million dollars since February, and 87 million dollars over March 1946.

Private builders financed 88 percent (260 million dollars) of all new nonfarm residential building in March, and their expenditures for new home construction for the first 3 months of 1947 (778 million dollars) was almost 60 percent over the figure for the same period of 1946.

TABLE 2.—*Estimated construction employment*¹ *in the United States, selected months of 1946 and 1947*

Type of project	Estimated employment (in thousands)			
	1947			1946
	March ²	February ³	January ⁴	March ⁵
All types.....	1,605	1,539	1,628	1,465
New construction.....	1,409	1,342	1,429	1,226
Private construction.....	1,094	1,085	1,127	1,036
Residential (nonfarm) building.....	429	426	459	385
Nonresidential building.....	440	481	492	489
Farm construction.....	43	22	22	31
Public utilities.....	182	156	154	131
Public construction ⁴	315	257	302	190
Residential building.....	71	62	82	15
Nonresidential building.....	49	37	44	65
Reclamation.....	18	13	13	7
River, harbor, and flood control.....	30	24	27	18
Streets and highways.....	82	65	72	41
All other ⁵	65	56	64	44
Minor building repairs.....	196	197	199	239
Residential.....	59	58	51	79
Nonresidential.....	84	92	94	115
Farm construction.....	53	47	54	45

¹ Estimates include wage earners, salaried employees, and special trades contractors actively engaged on new construction, additions, and alterations, and on repair work of the type usually covered by building permits, whether performed under contract or by force-account. (Force-account employees are workers hired directly by the owner and utilized as a separate work force to perform construction work of the type usually chargeable to capital account.) These figures should not be confused with those included in the Bureau's nonagricultural employment series, which covers only employees of construction contractors and Federal force-account workers, and excludes force-account workers of State and local governments, public utilities, and private firms.

² Preliminary.

³ Revised.

⁴ Includes the following force-account employees hired directly by the Federal Government: 16,600 in March 1946, 21,500 in January 1947, 20,800 in February, and 22,000 in March.

⁵ Includes airports, water supply and sewage disposal systems, electrification projects, community buildings, and miscellaneous public-service enterprises.

Other sharp advances in construction volume during March took place on privately financed public-utilities construction, which increased 17 percent over February to reach a total of 90 million dollars, and on highway work. The dollar volume for this public-utilities construction both for March and for the first 3 months of 1947 was 50 percent higher than for the same periods last year. The 51 million dollars expended on highway-construction work under way in March was 8 million dollars above the February total. A steep rise in this type of construction occurred throughout 1946, and, while seasonal contractions interrupted the program somewhat during winter months,

2½ times as much (141 million dollars) was spent in the first quarter of 1947 as in the first 3 months of 1946. Employment on both these categories of construction shared in the uptrend. The number of workers on public-utilities construction projects totaled 182,000 in March 1947—an increase of 51,000 (39 percent) over March 1946—and on street and highway construction 82,000—exactly twice as many as in March last year.

Nonresidential building construction, which is limited under regulations to assist the Veterans' Emergency Housing Program, was the only category to show a decline over the month, both in expenditures and employment.

TABLE 3.—Estimated construction expenditures ¹ in the United States, selected months of 1946 and 1947

Type of construction	Expenditures (in millions)					
	1947			March 1946 ²	First quarter, 1947 ³	First quarter, 1946 ³
	March ²	February ²	January ²			
Total construction.....	\$913	\$852	\$922	\$728	\$2, 687	\$1, 941
New construction ⁴	785	734	795	601	2, 314	1, 582
Private construction.....	616	592	634	500	1, 842	1, 315
Residential building (nonfarm).....	260	245	273	195	778	490
Nonresidential building.....	246	260	275	231	781	632
Industrial.....	146	152	159	113	457	321
Commercial.....	56	62	69	82	187	212
All other.....	44	46	47	36	137	99
Farm construction.....	20	10	10	14	40	30
Public utilities.....	90	77	76	60	243	163
Public construction.....	169	142	161	101	472	267
Residential building.....	36	34	37	10	107	18
Nonresidential (except military and naval facilities).....	23	19	22	23	64	69
Industrial facilities.....	4	4	5	7	13	23
All other.....	19	15	17	16	51	46
Military and naval facilities.....	14	12	13	13	39	44
Highway.....	51	43	47	26	141	60
Other public.....	45	34	42	29	121	76
Federal ⁵	19	14	18	15	51	39
State and local ⁶	26	20	24	14	70	37
Minor building repairs ⁷	128	118	127	127	373	359
Residential building (nonfarm).....	36	33	32	40	101	105
Nonresidential building.....	52	50	55	56	157	164
Farm construction.....	40	35	40	31	115	90

¹ Estimated construction expenditures represent the monetary value of the volume of work put in place in continental United States during the period indicated. These figures should not be confused with the data on value of construction reported in the table on urban building construction (table 4).

² Preliminary.

³ Revised.

⁴ Estimates of new construction were prepared jointly by the Bureau of Labor Statistics and the Office of Domestic Commerce (a successor to the Bureau of Foreign and Domestic Commerce), and include expenditures for new construction, major additions, and alterations.

⁵ Mainly river, harbor, flood control, reclamation, and power projects.

⁶ Includes water supply, sewage disposal, and miscellaneous public-service enterprises.

⁷ Covers privately financed structural repairs of the type for which building permits are generally required except "farm construction" which also includes maintenance work.

Urban Building

In February 1947, the estimated permit valuation of building construction in urban areas (including the value of Federal construction contracts awarded) amounted to 271 million dollars—continuing the uptrend which started in January.

Permit valuations of nonresidential building, which continues to be limited to essential and nondeferrable projects, or projects not requiring housing materials, dropped 4 million dollars between January and February to an 80-million-dollar total. New residential building valuations, however, increased 8 million dollars to a total of 140 million dollars. Additions, alterations, and repairs, at 51 million dollars, remained at practically the January level.

Builders planned to start construction on over 27,000 new family-dwelling units in urban areas in February—an increase of about 1,700 over January. All of these units were to be privately financed, and 82 percent of them were to be 1-family dwellings.

TABLE 4.—Estimated permit valuation ¹ of urban building construction ² by class of construction and by source of funds, selected months of 1946 and 1947

Class of construction	Valuation (in millions)				
	1947		1946	First 2 months of—	
	February ³	January ⁴	February ⁴	1947 ⁵	1946 ⁶
	Total				
All building construction.....	\$271	\$266	\$373	\$536	\$694
New residential ⁸	140	132	159	272	299
New nonresidential.....	80	84	149	164	273
Additions, alterations, and repairs.....	51	50	65	100	122
Non-Federal					
All building construction.....	269	250	342	519	646
New residential ⁸	140	125	138	265	262
New nonresidential.....	79	77	141	156	264
Additions, alterations, and repairs.....	50	48	63	98	120
Federal					
All building construction.....	2	\$ 16	31	\$ 17	748
New residential ⁸	(⁹)	\$ 7	21	\$ 7	737
New nonresidential.....	1	7	8	8	9
Additions, alterations, and repairs.....	1	2	2	2	2

¹ Includes value of Federal construction contracts awarded.

² Estimates of non-Federal (private, and State and local government) urban building construction are based upon building-permit reports received from places containing about 85 percent of the urban population of the country; estimates of federally financed projects are compiled from notifications of construction contracts awarded, which are obtained from other Federal agencies.

³ Preliminary.

⁴ Revised.

⁵ Includes value of dormitories and other nonhousekeeping residential buildings in addition to housekeeping units.

⁶ Includes \$7,264,000, the estimated cost of 1,084 dwelling units in New York City Housing Authority project. This project, although financed solely with city funds, is included with Federal projects in order to segregate public from private housing. All other types of building construction financed with State or local government funds are included under "Non-Federal."

⁷ Includes \$1,788,000, the estimated cost of 608 dwelling units contained in New York City Housing Authority projects.

⁸ Less than \$500,000.

Among the large housing projects for which permits were issued in urban areas in February was a 564-unit project in Manhattan Borough, New York City, to be financed by the Metropolitan Life Insurance Co., at an estimated cost of 1½ million dollars. Three large non-residential projects for which permits were issued in cities were (1) a factory to manufacture shipping containers at North Bergen, N. J., with an estimated valuation of a million dollars; (2) a factory valued at about 2½ million dollars at Cleveland, Ohio, to manufacture cook stoves and ranges; and (3) a construction project at Norfolk, Va., to provide 5 factory buildings, 2 terminal warehouses and a steel railroad pier—the entire project valued at 4¼ million dollars.

TABLE 5.—Estimated number and permit valuation ¹ of new dwelling units scheduled to be started in all urban areas ² selected months of 1946 and 1947

Source of funds and type of dwelling	February ³ 1947	January ⁴ 1947	February ⁴ 1946	First 2 months of—	
				1947 ⁵	1946 ⁴
	Number of dwelling units				
All dwellings.....	27,074	25,383	35,762	52,457	67,301
Privately financed.....	27,074	24,299	28,737	51,373	54,677
1-family.....	22,156	20,537	24,116	42,693	45,923
2-family ⁶	1,615	1,496	1,794	3,111	3,117
Multifamily ⁶	3,303	2,266	2,827	5,569	5,637
Federally financed ⁷	0	1,084	7,025	1,084	12,624
	Valuation (in thousands)				
All dwellings.....	\$138,443	\$131,771	\$151,931	\$270,214	\$287,101
Privately financed.....	138,443	124,507	132,884	262,950	252,269
1-family.....	118,613	108,433	116,934	227,046	222,195
2-family ⁶	6,375	6,342	6,666	12,717	11,677
Multifamily ⁶	13,455	9,732	9,284	23,187	18,397
Federally financed ⁷	0	7,264	19,047	7,264	34,832

¹ Includes value of Federal construction contracts awarded.

² See table 4, footnote 2, for source of urban estimates.

³ Preliminary.

⁴ Revised.

⁵ Includes 1- and 2-family dwellings with stores.

⁶ Includes multifamily dwellings with stores.

⁷ For number of, and estimated cost of, dwelling units contained in New York City Housing Authority projects, but included here with federally financed housing, see table 4, footnotes 6 and 7.

Hours and Earnings

In January 1947, average weekly earnings of \$59.97 in private building construction were only 35 cents under the December figure, when a 7-year peak was reached. The workweek was shortened during January by ¼ hour and averaged 37.6 hours. Average hourly earnings edged up 3 cents to reach \$1.59, an increase of 14 percent over January a year ago and the highest hourly earnings figure reported since January 1940, when monthly data first became available. Earnings reported are for all workers on construction-site pay rolls—skilled, semiskilled, and unskilled; superintendents, time clerks, etc.

Both general and special trades contractors reported wage increases during the month, which were reflected in higher hourly earnings. While the effect of a seasonal slow-down in construction work was offset somewhat by overtime, the workweek declined on all types of work as shown in table 6, resulting in lower weekly earnings. Average weekly pay of \$56.49 was reported by the general building contractors for an average 37-hour workweek; for the special trades contractors, average weekly pay of \$64.00 was reported for a 38-hour workweek. Contractors engaged in nonbuilding construction also reported increased hourly earnings which were, however, offset by a shortened workweek, resulting in decreased average weekly pay—\$56.67 in January compared with \$58.02 in December.

Over the year, average weekly earnings increased for all groups in the special building trades, but principally for persons employed at plastering, and plumbing and heating jobs. Wage increases during the year, for the most part, caused weekly earnings to rise \$14.50 (26 percent) from the level of a year ago for plastering, and \$11.23 (20 percent) to \$67.16 for plumbing and heating.

Reports are received monthly from over 11,000 different contractors. Data published are summaries of all reports received during the months shown but do not necessarily represent reports from identical firms

TABLE 6.—Average hours and earnings on private construction projects for selected types of work, January 1947¹

[Subject to revision]

Type of work	Average hours per week			Average weekly earnings ²			Average hourly earnings		
	January 1947	December 1946	January 1946	January 1947	December 1946	January 1946	January 1947	December 1946	January 1946
All types of work.....	37.9	38.8	(³)	\$59.38	\$59.92	(³)	\$1.568	\$1.545	(³)
Building construction.....	37.6	38.4	37.7	59.97	60.32	\$52.89	1.504	1.569	\$1.402
General contractors.....	37.2	38.0	36.8	56.49	56.73	49.83	1.518	1.495	1.355
Special building trades ⁴	38.1	40.0	38.5	64.00	64.53	55.57	1.680	1.655	1.444
Plumbing and heating.....	39.9	40.8	40.4	67.16	67.44	55.93	1.681	1.655	1.384
Painting and decorating.....	35.9	36.9	37.9	58.83	61.05	56.43	1.637	1.653	1.491
Electrical work.....	40.2	41.4	40.8	73.85	74.76	65.12	1.838	1.808	1.595
Masonry.....	34.9	37.5	32.9	56.49	58.36	47.70	1.618	1.556	1.450
Plastering and lathing.....	37.9	38.7	35.0	69.81	71.04	55.31	1.842	1.837	1.579
Carpentry.....	37.7	38.2	38.1	58.20	57.85	53.95	1.544	1.513	1.416
Roofing and sheet metal.....	34.9	36.4	36.4	51.49	52.84	49.57	1.477	1.450	1.361
Excavation and foundation.....	36.3	37.9	35.6	53.98	54.94	47.06	1.487	1.450	1.322
Nonbuilding construction.....	39.0	40.5	(³)	56.67	58.02	(³)	1.451	1.434	(³)
Highway and street.....	37.3	39.9	(³)	52.23	55.19	(³)	1.401	1.383	(³)
Heavy construction.....	39.1	40.3	(³)	57.94	59.11	(³)	1.482	1.466	(³)
Other.....	40.5	41.4	(³)	56.61	57.44	(³)	1.398	1.387	(³)

¹ Includes all firms reporting during the months shown (over 11,000) but not necessarily identical establishments. Data cover all workers on the construction-site payroll—skilled, semiskilled, and unskilled; superintendents, time clerks, etc.

² Hourly earnings when multiplied by weekly hours of work may not exactly equal weekly earnings because of rounding.

³ Not available prior to February 1946.

⁴ Includes types not shown separately.

Trends of Employment and Labor Turn-Over

Labor Force, February 1947

WHO IS COUNTED IN THE LABOR FORCE

Labor force.—Persons 14 years of age and over who are employed or unemployed during the census week (the week containing the eighth day of the month).

Employed.—Those who, during the census week (1) work full or part time for pay or profit; (2) work without pay in a family enterprise (farm or business) at least 15 hours; or (3) have a job but do not work because of illness, vacation, labor-management dispute, bad weather, or lay-off with definite instructions to return to work within 30 days.

Unemployed.—Those not working, but seeking a job.

Increases of 90,000 in unemployment and 130,000 in employment combined to raise the civilian labor force by 220,000 between January and February, according to the Bureau of the Census Monthly Report on the Labor Force. In early February, the civilian labor force numbered 58,010,000, including 55,520,000 employed and 2,490,000 unemployed.

The increase in job seekers over the month occurred almost entirely among veterans and reflected their flow into the labor market during the winter slack season. Of the 2 million men unemployed in early February, half were exservicemen.

The gain in employment between January and February represented the net effect of an unusually large seasonal increase of 420,000 in farm employment, partially offset by a decline of 290,000 among persons working at nonfarm jobs.

The number of nonfarm workers in February (48,600,000) was about 500,000 below the Christmas seasonal high point but 200,000 above last October's level. Bad weather and fuel shortages along the eastern seaboard early in February reduced the hours of work in nonagricultural activities during the census week. The total number of persons

working 35 hours or more in nonfarm jobs dropped 750,000 between January and February, while those working 15-34 hours rose by 410,000.

The number of farm workers (6,920,000) was approximately the same as a year ago, with an increase of 300,000 among veterans being balanced by a decline of the same magnitude among women. The upturn in farm employment between January and February marks the beginning of a seasonal expansion as farming activity heightens throughout the spring and early summer months.

Total labor force in the United States, classified by employment status, hours worked, and sex, January and February 1947 and February 1946

[Source: U. S. Department of Commerce, Bureau of the Census]

Item	Estimated number (in thousands) of persons 14 years of age and over ¹								
	Total, both sexes			Male			Female		
	Jan. 1947	Feb. 1947	Feb. 1946	Jan. 1947	Feb. 1947	Feb. 1946	Jan. 1947	Feb. 1947	Feb. 1946
Total labor force ²	59, 510	59, 630	59, 130	43, 560	43, 700	43, 020	15, 950	15, 930	16, 110
Civilian labor force.....	57, 790	58, 010	53, 890	41, 860	42, 100	37, 890	15, 930	15, 910	16, 000
Unemployment.....	2, 400	2, 490	2, 650	1, 950	2, 010	2, 140	450	480	510
Employment.....	55, 390	55, 520	51, 240	39, 910	40, 090	35, 750	15, 480	15, 430	15, 490
Nonagricultural.....	48, 890	48, 600	44, 300	34, 060	33, 830	29, 740	14, 830	14, 770	14, 560
Worked 35 hours or more.....	41, 500	40, 750	36, 310	29, 910	29, 280	25, 220	11, 590	11, 470	11, 090
Worked 15-34 hours.....	4, 280	4, 690	4, 180	2, 200	2, 540	2, 070	2, 080	2, 150	2, 110
Worked 1-14 hours ³	1, 400	1, 440	1, 350	660	670	620	740	770	730
With a job but not at work ⁴	1, 710	1, 720	2, 460	1, 290	1, 340	1, 830	420	380	630
Agricultural.....	6, 500	6, 920	6, 940	5, 850	6, 260	6, 010	650	660	900
Worked 35 hours or more.....	4, 040	4, 320	4, 480	3, 850	4, 190	4, 250	190	130	230
Worked 15-34 hours.....	1, 700	1, 890	1, 850	1, 330	1, 460	1, 310	370	430	540
Worked 1-14 hours ³	300	280	330	250	230	220	(*)	(*)	110
With a job but not at work ⁴	460	430	280	420	380	230	(*)	(*)	(*)

¹ Estimates are subject to sampling variation which may be large in cases where the quantities shown are relatively small. Therefore, the smaller estimates should be used with caution; those under 100,000 are not presented in the table but are replaced with an asterisk (*). All data exclude persons in institutions.

² Total labor force consists of the civilian labor force and the armed forces. Estimates of the armed forces during the census week are projected from data on net strength as of the first of the month.

³ Excludes persons engaged only in incidental unpaid family work (less than 15 hours); these persons are classified as not in the labor force.

⁴ Includes persons who had a job or business, but who did not work during the census week because of illness, bad weather, vacation, labor dispute, or because of temporary lay-off with definite instructions to return to work within 30 days of lay-off. Does not include unpaid family workers.

Summary of Employment Reports for February 1947

EMPLOYMENT in nonagricultural establishments at mid-February 1947 was 39,386,000, about the same as in January.

While construction and trade continued to decline as a result of unfavorable weather conditions and other seasonal influences, the trend in manufacturing was definitely upward.

Industrial and Business Employment

The largest gains between January and February 1947 occurred in the durable goods industries, of which the automobile industry alone added 22,000 production workers on completion of year-end inventories.

The iron and steel and heavy machinery industries added 26,000 to their industry pay rolls as the demand for their products continued firm.

The soft goods industries, which usually show employment increases in this period, remained practically unchanged. In food processing, where more than 38,000 were dropped, greater than seasonal declines

TABLE 1.—*Estimated number of employees in nonagricultural establishments, by industry division*

Industry division	Estimated number of employees (thousands)			
	Feb. 1947	Jan. 1947	Dec. 1946	Feb. 1946
Total estimated employment ¹	39,386	39,470	40,726	36,509
Manufacturing ²	15,114	15,048	15,026	12,536
Mining.....	826	827	819	808
Contract construction and Federal force-account construction.....	1,325	1,435	1,617	1,260
Transportation and public utilities.....	3,925	3,933	3,976	3,907
Trade.....	7,838	7,866	8,589	7,505
Finance, service, and miscellaneous.....	5,198	5,193	5,260	5,031
Federal, State, and local government, excluding Federal force-account construction.....	5,160	5,168	5,439	5,462

¹ Estimates include all full- and part-time wage and salary workers in non-agricultural establishments who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded.

² Estimates for manufacturing have been adjusted to levels indicated by final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency and are comparable with the production-worker estimates shown in table 2.

TABLE 2.—*Estimated number of production workers and indexes of production-worker employment in manufacturing industries, by major industry group ¹*

Group	Estimated number of production workers (in thousands)		Production-worker indexes (1939=100)	
	Feb. 1947	Feb. 1946	Feb. 1947	Feb. 1946
All manufacturing.....	12,329	9,989	150.5	121.9
Durable goods.....	6,310	4,427	174.7	122.6
Nondurable goods.....	6,019	5,562	131.4	121.4
Iron and steel and their products.....	1,506	843	151.9	85.0
Electrical machinery.....	575	348	221.9	134.2
Machinery, except electrical.....	1,138	831	215.4	157.2
Transportation equipment, except automobiles.....	457	467	287.7	294.4
Automobiles.....	744	415	185.0	103.0
Nonferrous metals and their products.....	417	291	181.9	126.8
Lumber and timber basic products.....	642	521	152.7	124.0
Furniture and finished lumber products.....	418	355	127.4	108.1
Stone, clay, and glass products.....	413	356	140.6	121.4
Textile-mill products and other fiber manufactures.....	1,254	1,157	109.7	101.2
Apparel and other finished textile products.....	1,135	993	143.8	125.8
Leather and leather products.....	368	348	106.2	100.4
Food.....	1,042	1,045	121.9	122.2
Tobacco manufactures.....	89	81	95.6	87.3
Paper and allied products.....	383	348	144.5	131.0
Printing, publishing, and allied industries.....	403	367	123.0	112.1
Chemicals and allied products.....	510	491	177.1	170.3
Products of petroleum and coal.....	151	138	142.3	130.8
Rubber products.....	246	214	203.0	177.1
Miscellaneous industries.....	438	380	179.0	155.4

¹ The estimates and indexes presented in this table have been adjusted to levels indicated by the final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency.

occurred in the canning and baking industries, in addition to normal pre-Lent decreases in slaughtering and meat packing.

A pre-Easter rise of 24,000 increased the apparel industry total to 1,135,000. Preliminary reports indicate that the increase from January to February 1947 is less than the prewar seasonal. Other industries such as textiles and leather also reported considerably less than seasonal gains.

Public Employment

A downward change of 22,000 in Federal employment in the month ending February 1, 1947, left 2.3 million persons still on the rolls. Of these 1 million, or 43 percent, were in the War and Navy Departments, while an additional 166,000 persons were in other independent agencies which were created especially for the war or reconversion emergencies. During the month, peacetime agencies exclusive of the Veterans' Administration showed an employment increase of less than 1,000, part of which resulted from the creation of the Office of Government Reports under the Executive Office of the President and the transfer to it of some personnel from the Office of Temporary Controls, a reconversion agency. Employment in the Veterans' Administration, which trebled during the period of heaviest military demobilization, September 1945-December 1946, reflected the tapering off of military separations by showing only relatively small gains (5,000 and 2,500 respectively) in the first 2 months of 1947.

Although the number of Federal employees in areas outside continental United States was 11,000 lower in February 1947, than in the preceding month, it was higher than in December 1946, because of the inclusion, on January 1, 1947, the officially declared end of World War II hostilities, of 44,000 seamen on ships operated by the Maritime Commission under contract. The inclusion of the seamen at the conclusion of hostilities was in accordance with a provision of the Federal Employees Pay Act of 1945. The same provision was responsible for the addition of 2,800 merchant-marine trainees to Federal employment within the continental area on the same date, but this increase was overshadowed by important decreases in other war agencies in the continental area.

Source of data.—Data for the Federal executive service are reported through the Civil Service Commission, whereas data for the legislative and judicial services and Government corporations are reported to the Bureau of Labor Statistics. Employment on Federal force-

account construction is included in both the executive branch (tables 3 and 4) and in construction employment (table 2 in the section, Construction).

Military personnel and pay figures are reported monthly to the Bureau of Labor Statistics but are published here only quarterly.

Mimeographed tables giving civilian employment and military personnel and pay, monthly, 1939 to date, and civilian pay rolls monthly, 1943 to date, are available upon request.

TABLE 3.—*Employment and pay rolls for regular Federal services and for Government corporations in selected months*

Year and month	Total	Executive ¹			Legis- lative	Judicial	Govern- ment corpora- tions ²
		All areas	Continental United States				
			Total	Washing- ton, D. C. area			
Employment ³							
February 1940.....	992, 856	958, 319	910, 890	127, 836	5, 889	2, 360	26, 288
February 1941.....	1, 232, 956	1, 196, 876	1, 119, 891	159, 098	5, 985	2, 507	27, 588
February 1942.....	1, 813, 014	1, 773, 533	1, 621, 985	226, 259	6, 354	2, 584	30, 543
February 1943.....	3, 031, 830	2, 988, 636	2, 730, 372	285, 477	6, 284	2, 597	34, 313
February 1944.....	3, 263, 016	3, 217, 941	2, 819, 973	263, 126	6, 115	2, 668	36, 292
February 1945.....	3, 516, 640	3, 473, 254	2, 888, 841	256, 043	6, 561	2, 643	34, 182
February 1946.....	2, 926, 050	2, 882, 635	2, 373, 885	232, 981	6, 433	3, 023	33, 959
December 1946.....	2, 561, 022	2, 518, 896	2, 220, 561	226, 460	6, 806	3, 061	32, 259
January 1947 ⁴	2, 326, 034	2, 284, 123	1, 951, 112	221, 293	6, 864	3, 066	31, 981
February 1947 ⁵	2, 303, 989	2, 261, 809	1, 940, 207	220, 207	7, 080	3, 069	32, 031
Pay rolls (in thousands) ⁶							
February 1943.....	\$623, 796	\$616, 563	(7)	\$57, 824	\$1, 415	\$728	\$5, 090
February 1944.....	679, 826	671, 930	\$618, 090	54, 730	1, 491	760	5, 645
February 1945.....	662, 047	654, 307	601, 350	54, 239	1, 621	782	5, 346
February 1946 ⁷	502, 043	493, 818	452, 929	49, 921	1, 768	940	5, 517
December 1946 ⁸	564, 288	554, 962	518, 093	57, 648	2, 169	1, 248	5, 909
January 1947 ⁹	518, 194	508, 671	461, 088	57, 543	2, 345	1, 191	5, 987
February 1947 ⁹	514, 535	505, 171	459, 106	57, 207	2, 308	1, 090	5, 966

¹ Includes employees on force-account construction. Beginning July 1945, data include clerks at third-class post offices who previously were working on a contract basis. Substitute rural mail carriers are excluded from the employment.

² Data are for employees of the Panama Railroad Co., the Federal Reserve banks, and banks of the Farm Credit Administration. Data for other Government corporations are included under the executive service.

³ Employment is as of the first of the calendar month.

⁴ Revised.

⁵ Subject to revision.

⁶ Pay rolls cover the entire calendar month.

⁷ Data not available.

TABLE 4.—*Employment and pay rolls for the executive branch of the Federal Government in selected months*¹

Year and month	All agencies	War agencies ²			Other agencies ³		
		Total	Conti- nental United States	Outside conti- nental United States ⁴	Total	Conti- nental United States	Outside conti- nental United States ⁴
Employment ⁵							
February 1940.....	958,319	241,249	204,848	36,401	717,070	706,042	11,028
February 1941.....	1,196,876	433,197	368,860	64,337	763,679	751,031	12,648
February 1942.....	1,773,533	930,853	793,172	137,681	842,680	828,813	13,867
February 1943.....	2,988,636	2,173,311	1,929,862	243,449	815,325	800,510	14,815
February 1944.....	3,217,941	2,401,552	2,019,816	381,736	816,389	800,157	16,232
February 1945.....	3,473,254	2,625,509	2,057,409	568,100	847,745	831,432	16,313
February 1946.....	2,882,635	1,863,334	1,377,049	486,285	1,019,301	996,836	22,465
December 1946.....	2,518,896	1,176,596	906,763	269,833	1,342,300	1,313,798	28,502
January 1947 ⁶	2,284,123	1,176,705	871,273	305,432	1,107,418	1,079,839	27,579
February 1947 ⁷	2,261,809	1,151,308	857,826	293,482	1,110,501	1,082,381	28,120
Pay rolls (in thousands) ⁸							
February 1943.....	\$616,563	\$464,843	(⁹)	(⁹)	\$151,720	(⁹)	(⁹)
February 1944.....	671,930	509,618	\$459,036	\$50,582	162,312	\$159,054	\$3,258
February 1945.....	654,307	488,688	439,230	49,458	165,619	162,120	3,499
February 1946 ⁷	493,818	294,207	258,010	36,167	199,611	194,919	4,692
December 1946 ⁷	554,962	259,235	228,986	30,249	295,727	289,107	6,620
January 1947 ⁷	508,671	252,531	211,794	40,737	256,140	249,294	6,846
February 1947 ⁷	505,171	248,453	209,027	39,426	256,718	250,078	6,640

¹ Includes employees on force-account construction.² Covers War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and the independent war emergency and reconversion agencies.³ Beginning July 1945, data include clerks at third-class post offices who previously were working on a contract basis. Substitute rural mail carriers are excluded from the employment.⁴ Includes Alaska and the Panama Canal Zone.⁵ Employment is as of the first of the calendar month.⁶ Revised.⁷ Subject to revision.⁸ Pay rolls cover the entire calendar month.⁹ Data not available.

Detailed Reports for Industrial and Business Employment, January 1947

MONTHLY REPORTS on employment and pay rolls are presented below for more than 150 manufacturing industries and for 26 nonmanufacturing industries including class 1 steam railroads. Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and amount of pay rolls for the period ending nearest the 15th of the month.

TABLE 1.—Estimated number of production workers in manufacturing industries ¹

Industry group and industry	Estimated number of production workers (in thousands)			
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946
All manufacturing.....	12,269	12,271	12,212	10,666
Durable goods.....	6,249	6,213	6,203	5,205
Nondurable goods.....	6,020	6,058	6,009	5,461
<i>Durable goods</i>				
Iron and steel and their products.....	1,491	1,462	1,476	1,308
Blast furnaces, steel works, and rolling mills.....	479.7	467.0	481.5	448.7
Gray-iron and semisteel castings.....	86.2	84.4	84.1	74.3
Malleable-iron castings.....	25.2	24.2	24.8	24.5
Steel castings.....	50.5	51.5	51.2	52.6
Cast-iron pipe and fittings.....	19.8	19.2	19.4	15.4
Tin cans and other tinware.....	41.9	41.5	41.3	38.0
Wire drawn from purchased rods.....	30.5	29.9	29.9	29.4
Wirework.....	41.9	40.5	40.9	33.9
Cutlery and edge tools.....	27.8	27.7	27.3	23.1
Tools (except edge tools, machine tools, files, and saws).....	28.7	26.8	26.4	24.2
Hardware.....	50.1	49.6	49.5	38.2
Plumbers' supplies.....	30.1	29.8	29.2	21.6
Stoves, oil burners, and heating equipment not elsewhere classified.....	62.7	60.8	62.0	51.6
Steam and hot-water heating apparatus and steam fittings.....	52.3	51.0	51.4	44.0
Stamped and enameled ware and galvanizing.....	84.9	84.5	83.7	69.3
Fabricated structural and ornamental metalwork.....	57.5	57.1	56.9	44.7
Metal doors, sash, frames, molding, and trim.....	10.2	10.1	10.1	7.4
Bolts, nuts, washers, and rivets.....	21.5	21.2	21.0	20.9
Forgings, iron and steel.....	26.9	26.7	26.7	25.6
Wrought pipe, welded and heavy-riveted.....	13.6	13.2	13.8	14.5
Screw machine products and wood screws.....	29.4	29.3	29.3	26.8
Steel barrels, kegs, and drums.....	6.2	6.1	6.3	6.3
Firearms.....	14.3	14.0	14.2	10.9
Electrical machinery.....	575	575	568	476
Electrical equipment.....	315.5	314.8	310.9	290.6
Radios and phonographs.....	92.6	93.3	91.5	65.5
Communication equipment.....	92.4	93.1	92.2	63.9
Machinery, except electrical.....	1,127	1,117	1,107	956
Machinery and machine-shop products.....	381.0	379.6	377.7	333.7
Engines and turbines.....	45.4	45.6	45.6	39.0
Tractors.....	54.8	54.5	53.7	53.3
Agricultural machinery, excluding tractors.....	45.6	44.8	43.5	38.9
Machine tools.....	59.8	60.6	60.3	58.1
Machine-tool accessories.....	51.3	51.5	51.8	45.7
Textile machinery.....	36.4	35.5	34.7	29.0
Pumps and pumping equipment.....	58.6	58.9	58.3	52.8
Typewriters.....	22.7	22.3	22.2	14.7
Cash registers, adding and calculating machines.....	37.6	37.3	36.4	29.5
Washing machines, wringers and driers, domestic.....	12.5	12.4	12.6	9.9
Sewing machines, domestic and industrial.....	10.9	10.7	10.5	8.1
Refrigerators, and refrigeration equipment.....	68.2	65.2	64.2	47.4
Transportation equipment, except automobiles.....	456	456	447	519
Locomotives.....	26.6	27.1	27.1	23.3
Cars, electric- and steam-railroad.....	50.2	50.4	50.3	47.2
Aircraft and parts, excluding aircraft engines.....	144.7	144.7	146.3	118.6
Aircraft engines.....	29.8	29.0	29.3	21.3
Shipbuilding and boatbuilding.....	142.1	142.8	133.8	249.0
Motorcycles, bicycles, and parts.....	12.2	12.1	11.7	8.5

See footnotes at end of table.

TABLE 1.—Estimated number of production workers in manufacturing industries¹—Con.

Industry group and industry	Estimated number of production workers (in thousands)			
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946
<i>Durable goods—Continued</i>				
Automobiles.....	722	733	742	416
Nonferrous metals and their products.....	412	411	406	333
Smelting and refining, primary, of nonferrous metals.....	40.1	39.9	39.3	34.2
Alloying and rolling and drawing of nonferrous metals except aluminum.....	63.0	62.8	62.0	55.7
Clocks and watches.....	28.3	28.2	28.5	21.7
Jewelry (precious metals) and jewelers' findings.....	18.0	18.0	17.4	15.8
Silverware and plated ware.....	15.2	15.2	15.1	12.2
Lighting equipment.....	32.4	31.7	31.2	18.5
Aluminum manufactures.....	51.2	51.3	50.9	42.0
Sheet metal work, not elsewhere classified.....	26.8	27.0	27.2	22.5
Lumber and timber basic products.....	639	640	645	514
Sawmills and logging camps.....	228.5	231.4	235.5	201.7
Planing and plywood mills.....	76.9	76.5	76.8	64.8
Furniture and finished lumber products.....	413	407	401	348
Mattresses and bedsprings.....	23.4	23.1	23.8	18.0
Furniture.....	173.7	171.5	169.1	149.7
Wooden boxes, other than cigar.....	26.5	25.9	25.9	23.9
Caskets and other morticians' goods.....	14.8	14.7	14.0	12.5
Wood preserving.....	13.1	12.7	12.4	11.6
Wood, turned and shaped.....	24.5	24.1	23.2	21.4
Stone, clay, and glass products.....	414	412	411	335
Glass and glassware.....	104.1	103.8	104.2	86.9
Glass products made from purchased glass.....	13.2	12.9	12.7	10.9
Cement.....	28.9	29.1	28.7	21.8
Brick, tile, and terra cotta.....	63.2	62.2	62.3	52.0
Pottery and related products.....	49.6	49.4	48.6	41.6
Gypsum.....	6.1	6.2	6.1	4.7
Wallboard, plaster (except gypsum), and mineral wool.....	11.1	11.1	11.0	10.1
Lime.....	8.9	8.9	9.0	8.2
Marble, granite, slate, and other products.....	16.9	17.3	17.2	13.7
Abrasives.....	20.1	20.1	20.0	16.8
Asbestos products.....	21.7	21.7	21.6	14.3
<i>Nondurable goods</i>				
Textile-mill products and other fiber manufactures.....	1,252	1,252	1,240	1,127
Cotton manufactures, except smallwares.....	470.1	468.8	465.3	428.7
Cotton smallwares.....	14.6	14.5	14.3	13.5
Silk and rayon goods.....	95.3	95.6	94.8	87.5
Woolen and worsted manufactures, except dyeing and finishing.....	163.0	164.4	162.2	149.1
Hosiery.....	119.2	118.5	117.5	106.3
Knitted cloth.....	10.4	10.9	11.2	10.7
Knitted outerwear and knitted gloves.....	30.4	31.7	31.5	28.7
Knitted underwear.....	36.0	36.0	35.6	33.6
Dyeing and finishing textiles, including woolen and worsted.....	65.5	65.0	64.8	60.5
Carpets and rugs, wool.....	26.7	26.4	25.7	20.1
Hats, fur-felt.....	12.0	11.9	11.7	10.3
Jute goods, except felts.....	3.8	3.7	3.6	3.8
Cordage and twine.....	15.0	15.4	15.2	14.7
Apparel and other finished textile products.....	1,111	1,099	1,083	956
Men's clothing, not elsewhere classified.....	205.6	205.5	204.3	180.6
Shirts, collars, and nightwear.....	57.7	57.8	56.8	50.5
Underwear and neckwear, men's.....	12.5	12.9	12.8	11.3
Work shirts.....	14.0	13.8	13.5	12.7
Women's clothing, not elsewhere classified.....	213.7	211.2	208.9	207.1
Corsets and allied garments.....	17.0	16.9	16.6	15.0
Millinery.....	19.1	17.8	16.5	19.6
Handkerchiefs.....	2.5	2.5	2.4	2.3
Curtains, draperies, and bedspreads.....	12.3	12.8	14.5	11.8
Housefurnishings, other than curtains, etc.....	10.4	10.7	10.7	9.6
Textile bags.....	14.5	14.8	14.4	14.7
Leather and leather products.....	365	360	354	338
Leather.....	43.2	42.9	41.1	43.5
Boot and shoe cut stock and findings.....	17.8	18.1	18.2	17.1
Boots and shoes.....	199.6	194.8	192.2	182.1
Leather gloves and mittens.....	10.1	10.6	10.9	11.2
Trunks and suitcases ²	14.0	14.7	14.8	12.6

See footnotes at end of table.

TABLE 1.—Estimated number of production workers in manufacturing industries¹—Con.

Industry group and industry	Estimated number of production workers (in thousands)			
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946
<i>Nondurable goods—Continued</i>				
Food.....	1,080	1,121	1,123	1,051
Slaughtering and meat packing.....	153.9	150.7	138.9	152.6
Butter.....	22.2	23.5	24.4	21.0
Condensed and evaporated milk.....	13.1	12.9	13.1	12.6
Ice cream.....	16.1	16.4	16.8	15.0
Flour.....	30.5	30.7	30.9	31.5
Feeds, prepared.....	21.9	21.2	21.8	23.8
Cereal preparations.....	10.2	10.8	11.0	10.4
Baking.....	249.0	252.7	249.0	254.1
Sugar refining, cane.....	14.4	14.7	12.5	12.6
Sugar, beet.....	9.2	16.1	22.0	7.8
Confectionery.....	56.9	58.6	57.1	52.8
Beverages, nonalcoholic.....	22.5	23.1	23.2	22.8
Malt liquors.....	52.6	53.7	53.3	54.8
Canning and preserving.....	94.6	115.8	131.9	92.5
Tobacco manufactures.....	89	92	91	81
Cigarettes.....	34.1	34.5	34.5	32.5
Cigars.....	41.5	42.9	42.3	35.2
Tobacco (chewing and smoking) and snuff.....	7.5	7.8	8.0	8.0
Paper and allied products.....	383	383	380	341
Paper and pulp.....	172.0	171.8	170.6	156.6
Paper goods, other.....	47.5	47.9	48.0	44.4
Envelopes.....	10.9	11.0	10.9	9.8
Paper bags.....	16.0	15.8	15.4	13.6
Paper boxes.....	91.3	92.6	91.8	82.6
Printing, publishing, and allied industries.....	400	403	399	359
Newspapers and periodicals.....	135.2	136.7	135.0	122.3
Printing, book and job.....	166.2	166.3	165.0	148.6
Lithographing.....	30.3	30.5	30.3	27.3
Bookbinding.....	33.7	34.1	33.6	29.1
Chemicals and allied products.....	508	504	501	489
Paints, varnishes, and colors.....	36.3	36.4	35.9	33.0
Drugs, medicines, and insecticides.....	54.5	53.8	53.5	49.7
Perfumes and cosmetics.....	11.0	11.6	12.4	12.0
Soap.....	14.6	14.3	13.8	13.6
Rayon and allied products.....	58.9	58.6	58.9	59.4
Chemicals, not elsewhere classified.....	124.3	122.9	120.5	114.6
Explosives and safety fuses.....	13.4	12.9	12.7	17.3
Compressed and liquefied gases.....	5.8	5.7	5.8	5.6
Ammunition, small-arms.....	6.6	6.6	6.8	9.6
Fireworks.....	3.0	3.5	3.5	2.1
Cottonseed oil.....	17.4	19.0	20.5	17.7
Fertilizers.....	25.6	23.1	22.1	24.9
Products of petroleum and coal.....	150	150	151	142
Petroleum refining.....	98.3	99.4	99.1	96.1
Coke and byproducts.....	25.5	25.0	25.7	23.8
Paving materials.....	1.6	1.6	1.8	1.4
Roofing materials.....	12.4	12.5	12.7	10.4
Rubber products.....	246	248	245	209
Rubber tires and inner tubes.....	110.6	112.1	112.0	98.8
Rubber boots and shoes.....	19.9	19.7	19.2	16.3
Rubber goods, other.....	76.6	77.0	76.2	65.7
Miscellaneous industries.....	436	446	442	368
Instruments (professional and scientific), and fire control equipment.....	20.1	20.4	19.4	22.1
Photographic apparatus.....	25.3	25.4	25.4	22.0
Optical instruments and ophthalmic goods.....	21.8	21.9	21.6	20.2
Pianos, organs, and parts.....	10.4	9.5	9.9	6.8
Games, toys, and dolls.....	21.5	24.2	25.2	17.6
Buttons.....	10.1	10.5	10.2	9.6
Fire extinguishers.....	2.1	2.2	2.1	2.3

¹ January 1947 estimates are based on reports from 32,100 cooperating establishments covering 7,165,000 production workers. Estimates for the major industry groups have been adjusted to levels indicated by final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency. Estimates for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures but not to Federal Security Agency data. For this reason, together with the fact that this Bureau has not prepared estimates for certain industries, the sum of the individual industry estimates will not agree with the totals shown for the major industry groups.

² Revisions have been made as follows in the data for earlier months: *Trunks and suitcases*.—October 1946 to 15.0.

EMPLOYMENT AND PAY ROLLS ALL MANUFACTURING INDUSTRIES

1939=100

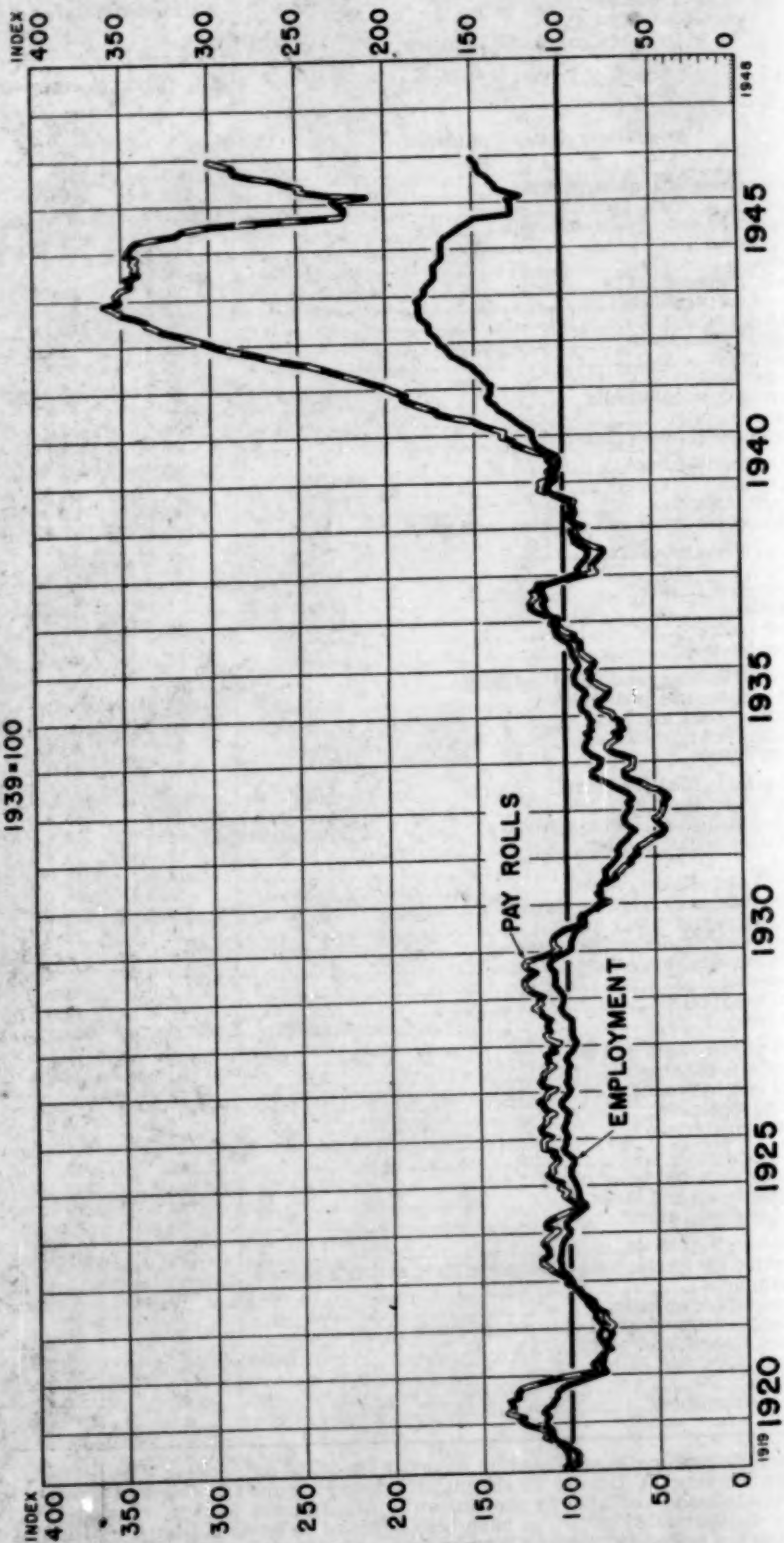
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

TABLE 2.—Indexes of production-worker employment and pay rolls in manufacturing industries¹

[1939 average=100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946
All manufacturing.....	149.8	149.8	149.1	130.2	300.3	299.5	291.6	229.2
Durable goods.....	173.1	172.1	171.8	144.1	329.2	327.3	321.3	243.0
Nondurable goods.....	131.4	132.2	131.2	110.2	272.0	272.4	262.6	215.7
<i>Durable goods</i>								
Iron and steel and their products.....	150.4	147.4	148.9	131.9	276.7	265.5	270.0	216.1
Blast furnaces, steel works, and rolling mills.....	123.5	120.2	124.0	115.5	208.9	198.9	208.7	173.2
Gray-iron and semisteel castings.....	147.4	144.5	144.0	127.2	317.1	307.8	299.6	247.0
Malleable-iron castings.....	139.6	134.3	137.5	135.9	304.6	286.1	294.4	264.8
Steel castings.....	167.7	171.3	170.3	174.9	302.8	315.4	315.5	263.6
Cast-iron pipe and fittings.....	120.0	116.2	117.6	93.4	286.7	259.9	262.4	186.4
Tin cans and other tinware.....	131.8	130.5	129.9	119.7	243.9	244.5	232.6	208.0
Wire drawn from purchased rods.....	138.8	135.9	136.3	134.0	247.7	239.6	240.7	199.2
Wirework.....	137.7	133.4	134.6	111.6	273.8	261.7	261.7	206.2
Cutlery and edge tools.....	180.5	179.8	177.3	150.1	405.1	404.7	389.9	305.3
Tools (except edge tools, machine tools, files, and saws).....	174.1	175.0	172.4	158.3	361.3	360.8	348.8	290.3
Hardware.....	140.4	139.0	139.0	107.1	289.0	286.2	281.5	203.0
Plumbers' supplies.....	122.2	120.8	118.6	87.8	237.6	226.7	216.2	146.8
Stoves, oil burners, and heating equipment not elsewhere classified.....	135.9	131.7	134.4	111.9	277.1	264.8	265.0	197.2
Steam and hot-water heating apparatus and steam fittings.....	172.4	168.3	169.7	145.1	326.4	312.7	328.4	238.6
Stamped and enameled ware and galvanizing.....	152.9	152.2	150.7	124.7	318.3	320.9	303.2	227.5
Fabricated structural and ornamental metalwork.....	162.0	160.8	160.3	125.9	287.9	293.0	275.3	193.5
Metal doors, sash, frames, molding, and trim.....	131.2	130.2	131.0	95.8	255.2	257.4	250.2	158.0
Bolts, nuts, washers, and rivets.....	150.1	148.3	147.1	145.8	275.5	272.9	270.3	248.4
Forgings, iron and steel.....	175.0	173.9	173.9	166.4	341.0	333.2	323.6	294.4
Wrought pipe, welded and heavy riveted.....	161.9	158.0	164.8	172.8	292.9	285.8	295.5	281.8
Screw-machine products and wood screws.....	173.9	173.0	173.2	158.4	355.0	351.3	349.6	290.1
Steel barrels, kegs, and drums.....	102.9	100.1	103.8	103.4	232.4	231.9	237.2	191.5
Firearms.....	285.2	280.6	284.0	217.0	569.8	568.0	569.9	398.1
Electrical machinery.....	222.0	222.0	219.2	183.7	408.7	414.3	400.6	302.6
Electrical equipment.....	174.6	174.1	172.0	160.8	316.5	317.0	308.3	258.9
Radios and phonographs.....	212.7	214.4	210.2	150.6	424.3	448.9	427.3	271.9
Communication equipment.....	287.5	289.7	287.0	199.0	526.6	537.6	521.3	327.4
Machinery, except electrical.....	213.2	211.3	209.5	180.9	390.0	384.8	375.5	297.5
Machinery and machine-shop products.....	188.3	187.6	186.7	164.9	348.8	346.7	336.8	272.8
Engines and turbines.....	243.5	244.5	244.5	209.0	491.7	500.8	492.4	371.4
Tractors.....	175.2	174.2	171.6	170.5	273.3	271.3	269.9	249.2
Agricultural machinery, excluding tractors.....	164.1	161.0	156.3	139.8	296.0	291.1	280.7	233.7
Machine tools.....	163.2	165.3	164.6	158.6	282.7	290.7	285.5	262.3
Machine-tool accessories.....	204.0	204.8	205.9	181.8	342.7	351.0	343.4	284.1
Textile machinery.....	166.1	161.8	158.5	132.6	330.9	315.8	301.1	247.5
Pumps and pumping equipment.....	241.8	243.1	240.6	217.9	464.8	467.8	451.1	394.6
Typewriters.....	139.8	137.2	137.2	90.7	276.2	270.1	279.0	166.2
Cash registers, adding and calculating machines.....	191.2	189.3	185.2	149.9	355.7	347.2	352.0	262.0
Washing machines, wringers and driers, domestic.....	167.7	166.5	168.2	133.1	316.9	302.7	291.7	213.1
Sewing machines, domestic and industrial.....	138.6	136.2	133.6	102.8	277.3	273.0	260.5	185.3
Refrigerators and refrigeration equipment.....	194.1	185.6	182.6	134.9	345.7	306.4	301.9	164.1
Transportation equipment, except automobiles.....	287.1	287.2	281.6	326.9	543.0	550.0	511.5	559.1
Locomotives.....	410.9	418.8	419.4	360.8	797.2	876.0	836.8	735.5
Cars, electric- and steam-railroad.....	204.7	205.4	205.2	192.3	412.4	408.4	406.6	323.8
Aircraft and parts, excluding aircraft engines.....	364.8	364.8	368.8	298.9	674.8	683.3	680.4	514.3
Aircraft engines.....	334.7	326.2	329.8	239.7	541.7	533.7	484.3	356.6
Shipbuilding and boatbuilding.....	205.2	206.2	193.2	359.6	394.2	399.1	336.8	602.5
Motorcycles, bicycles, and parts.....	175.0	173.6	168.1	122.0	315.1	346.7	318.4	204.4
Automobiles.....	179.4	182.3	184.5	103.5	306.4	316.6	313.6	153.5
Nonferrous metals and their products.....	179.9	179.1	177.2	145.3	341.6	343.1	332.5	256.1
Smelting and refining, primary, of nonferrous metals.....	145.2	144.4	142.1	123.8	267.4	269.2	256.8	216.4
Alloying and rolling and drawing of nonferrous metals except aluminum.....	162.2	161.7	159.7	143.5	301.4	301.9	290.0	253.9
Clocks and watches.....	139.3	139.1	140.5	116.7	296.0	306.3	309.6	219.8
Jewelry (precious metals) and jewelers' findings.....	124.7	124.4	120.3	109.5	236.5	250.3	231.0	196.6
Silverware and plated ware.....	125.2	125.5	124.5	100.7	271.9	275.8	261.4	198.2
Lighting equipment.....	158.3	154.8	152.5	90.3	285.9	272.7	271.2	141.7
Aluminum manufactures.....	217.6	217.7	216.3	178.5	383.6	384.5	373.7	269.1
Sheet-metal work not elsewhere classified.....	142.8	144.1	145.2	119.8	281.3	282.6	278.0	214.1

See footnotes at end of table.

TABLE 2.—Indexes of production-worker employment and pay rolls in manufacturing industries¹—Continued

[1939 average=100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946
<i>Durable goods—Continued</i>								
Lumber and timber basic products.....	152.0	152.3	153.5	122.3	315.5	313.5	306.9	207.7
Sawmills and logging camps.....	79.3	80.3	81.8	70.0	163.4	163.6	163.5	118.2
Planing and plywood mills.....	105.9	105.3	105.7	89.2	216.2	215.4	204.7	148.9
Furniture and finished lumber products.....	126.0	123.9	122.1	106.0	269.6	266.9	256.8	192.9
Mattresses and bedsprings.....	127.6	125.9	129.8	97.9	258.9	259.0	258.6	173.2
Furniture.....	109.1	107.8	106.2	94.0	233.8	230.7	223.0	169.3
Wooden boxes, other than cigar.....	104.4	102.2	102.0	94.2	233.1	234.6	223.8	185.4
Caskets and other morticians' goods.....	119.0	117.8	112.7	100.6	227.3	225.1	206.1	169.8
Wood preserving.....	116.1	112.6	110.7	102.9	280.5	278.1	267.8	206.8
Wood, turned and shaped.....	111.5	109.6	105.6	97.3	236.7	237.0	222.4	180.2
Stone, clay, and glass products.....	140.9	140.5	140.0	114.3	271.9	274.0	267.4	185.4
Glass and glassware.....	149.1	148.6	149.3	124.5	282.6	283.1	276.9	192.1
Glass products made from purchased glass.....	131.6	129.0	127.1	108.6	267.9	263.6	252.6	178.9
Cement.....	121.5	122.2	120.6	91.5	197.9	209.3	206.7	135.1
Brick, tile, and terra cotta.....	111.3	109.6	109.7	91.5	226.6	225.2	222.3	155.2
Pottery and related products.....	149.9	149.1	146.8	125.8	270.0	274.4	262.5	195.5
Gypsum.....	123.8	124.8	124.1	95.8	243.8	245.1	241.5	160.5
Wallboard, plaster (except gypsum), and mineral wool.....	136.5	137.1	135.6	124.7	292.0	301.6	289.7	233.2
Lime.....	94.1	93.6	95.2	86.2	208.5	219.7	221.4	169.8
Marble, granite, slate, and other products.....	91.3	93.6	93.2	74.0	152.9	158.0	151.5	109.6
Abrasives.....	259.5	260.0	259.0	217.6	471.1	459.9	440.8	325.3
Asbestos products.....	136.8	136.4	136.0	89.9	305.5	300.0	293.4	177.8
<i>Nondurable goods</i>								
Textile-mill products and other fiber manufactures.....	109.5	109.4	108.4	98.6	256.3	255.7	247.9	190.7
Cotton manufactures, except smallwares.....	118.7	118.4	117.5	108.3	304.4	301.2	293.5	217.0
Cotton smallwares.....	110.0	109.0	107.5	101.6	239.3	231.9	220.6	195.6
Silk and rayon goods.....	79.5	79.8	79.1	73.0	200.1	197.9	191.4	149.4
Woolen and worsted manufactures, except dyeing and finishing.....	109.2	110.2	108.7	99.9	251.8	253.0	242.7	206.6
Hosiery.....	74.9	74.5	73.9	66.8	157.1	158.2	154.5	115.7
Knitted cloth.....	95.6	99.6	102.9	98.3	197.5	207.1	217.4	190.8
Knitted outerwear and knitted gloves.....	108.0	112.7	112.0	102.1	238.3	250.4	252.2	196.3
Knitted underwear.....	93.4	93.4	92.4	87.3	215.2	216.1	207.9	165.9
Dyeing and finishing textiles including woolen and worsted.....	97.9	97.2	96.9	90.5	212.8	210.4	201.6	167.7
Carpets and rugs, wool.....	104.4	103.1	100.3	78.7	210.6	214.3	204.0	135.1
Hats, fur-felt.....	82.5	81.7	80.6	70.7	180.6	191.0	185.2	151.9
Jute goods, except felts.....	105.2	102.3	101.2	105.0	240.1	236.4	228.6	205.0
Cordage and twine.....	124.0	127.2	125.8	121.4	271.8	278.4	268.0	229.2
Apparel and other finished textile products.....	140.7	139.2	137.2	121.0	308.2	298.3	288.5	228.0
Men's clothing, not elsewhere classified.....	94.0	94.0	93.4	82.6	209.0	210.7	206.7	148.0
Shirts, collars, and nightwear.....	81.9	82.0	80.6	71.7	193.1	198.1	188.3	135.9
Underwear and neckwear, men's.....	77.5	79.6	79.0	70.1	193.7	200.8	205.8	147.5
Work shirts.....	104.2	102.2	100.7	94.2	246.7	254.1	242.6	181.6
Women's clothing, not elsewhere classified.....	78.7	77.7	76.9	76.3	171.9	159.1	154.2	149.4
Corsets and allied garments.....	90.4	90.0	88.3	79.9	186.0	185.9	182.1	147.5
Millinery.....	78.4	73.3	67.8	80.6	140.0	116.7	100.4	146.6
Handkerchiefs.....	51.5	51.5	50.6	47.2	113.3	124.7	118.8	87.9
Curtains, draperies, and bedspreads.....	73.0	75.9	86.0	70.1	154.6	164.9	190.5	138.8
Housefurnishings, other than curtains, etc.....	97.9	100.5	101.2	90.6	197.2	207.5	209.3	165.9
Textile bags.....	120.9	123.5	120.1	122.5	245.9	242.7	226.9	204.2
Leather and leather products.....	105.2	103.6	102.1	97.4	219.0	216.8	200.1	185.2
Leather.....	91.5	90.7	87.0	92.0	179.3	174.5	160.8	163.2
Boot and shoe cut stock and findings.....	94.6	95.8	96.5	90.6	178.4	178.4	170.9	160.8
Boots and shoes.....	91.5	89.3	88.2	83.5	197.5	194.7	177.6	164.0
Leather gloves and mittens.....	101.0	106.0	108.6	111.7	191.9	201.9	211.9	203.2
Trunks and suitcases ²	168.5	176.7	178.1	151.2	321.0	353.1	348.3	262.8
Food.....	126.4	131.2	131.4	123.0	252.4	259.2	248.1	215.0
Slaughtering and meat packing.....	127.7	125.0	115.3	126.7	267.5	236.9	215.7	217.9
Butter.....	123.7	130.6	136.1	117.2	235.0	246.6	243.4	195.1
Condensed and evaporated milk.....	134.6	132.5	135.4	130.2	269.8	256.2	253.7	219.3
Ice cream.....	102.3	104.4	107.2	95.3	181.6	185.5	183.2	146.2

See footnotes at end of table.

TABLE 2.—Indexes of production-worker employment and pay rolls in manufacturing industries¹—Continued

[1939 average=100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946
<i>Nondurable goods—Continued</i>								
Food—Continued								
Flour.....	123.2	123.9	124.8	127.0	268.2	267.8	256.1	228.0
Feeds, prepared.....	142.1	137.6	141.5	154.7	284.3	266.9	273.5	276.4
Cereal preparations.....	137.0	145.0	147.0	139.6	260.5	271.9	271.6	228.3
Baking.....	107.9	109.6	107.9	110.2	201.1	209.0	199.0	180.1
Sugar refining, cane.....	101.6	103.5	88.4	89.0	164.0	194.4	142.8	132.1
Sugar, beet.....	88.0	154.8	211.1	74.7	158.6	341.8	426.2	121.2
Confectionery.....	114.3	117.9	114.9	106.2	226.3	240.5	226.9	191.1
Beverages, nonalcoholic.....	105.8	108.5	109.2	107.4	164.8	169.1	163.7	146.3
Malt liquors.....	145.7	148.7	147.6	151.9	234.9	251.2	236.9	228.1
Canning and preserving.....	70.3	86.2	98.1	68.8	158.2	201.1	212.9	144.1
Tobacco manufactures.....	95.8	98.3	97.6	87.0	209.4	222.0	212.7	166.7
Cigarettes.....	124.2	125.9	125.7	118.3	241.5	254.7	247.1	201.4
Cigars.....	81.6	84.3	83.0	69.2	194.4	206.7	194.3	145.7
Tobacco (chewing and smoking) and snuff.....	82.1	85.4	87.0	87.7	155.8	166.8	166.7	137.4
Paper and allied products.....	144.2	144.3	143.3	128.6	281.6	281.7	273.9	221.7
Paper and pulp.....	125.2	125.0	124.1	113.9	245.6	244.9	240.3	198.4
Paper goods, other.....	126.2	127.4	127.6	118.0	246.4	249.0	240.0	201.8
Envelopes.....	125.9	126.7	125.0	113.2	234.9	235.4	229.3	185.5
Paper bags.....	144.7	142.4	139.1	122.9	292.2	283.5	268.6	218.5
Paper boxes.....	132.0	133.9	132.7	119.5	257.9	262.1	254.6	204.2
Printing, publishing, and allied industries.....	122.1	122.8	121.6	109.4	210.7	214.9	205.5	165.7
Newspapers and periodicals.....	114.0	115.2	113.7	103.1	185.2	189.7	182.0	143.5
Printing book and job.....	131.5	131.6	130.6	117.6	235.2	239.4	227.9	188.8
Lithographing.....	116.4	117.3	116.5	105.2	201.8	203.4	196.1	163.4
Bookbinding.....	130.9	132.3	130.5	112.9	278.0	283.6	269.1	211.1
Chemicals and allied products.....	176.3	174.9	173.7	169.7	326.9	322.1	311.8	285.2
Paints, varnishes, and colors.....	129.0	129.2	127.7	117.4	216.4	214.7	208.2	180.1
Drugs, medicines, and insecticides.....	198.7	196.4	195.4	181.5	354.9	351.3	341.9	281.4
Perfumes and cosmetics.....	105.7	111.8	120.0	115.4	185.9	202.4	215.5	174.9
Soap.....	107.4	105.5	101.3	100.3	199.2	195.7	170.8	169.1
Rayon and allied products.....	122.0	121.3	121.9	123.0	219.7	216.3	215.2	197.0
Chemicals, not elsewhere classified.....	178.6	176.7	173.3	164.7	321.0	313.4	301.3	273.4
Explosives and safety fuses.....	184.9	177.4	174.6	238.7	320.3	299.2	282.7	360.9
Compressed and liquified gases.....	146.2	144.0	146.0	141.0	240.6	243.2	242.5	233.5
Ammunition, small-arms.....	155.9	155.8	159.8	225.8	332.3	326.7	332.3	428.2
Fireworks.....	258.9	298.7	305.9	183.4	661.1	788.6	824.6	474.3
Cottonseed oil.....	144.5	124.8	134.7	116.8	296.7	328.7	341.3	252.8
Fertilizers.....	136.6	122.8	117.7	132.5	327.6	304.9	276.6	282.7
Products of petroleum and coal.....	141.3	142.1	142.6	134.0	249.0	246.6	245.7	220.9
Petroleum refining.....	135.0	136.4	136.0	131.9	230.5	233.2	226.9	210.6
Coke and byproducts.....	117.7	115.1	118.3	109.7	220.1	195.9	216.2	191.7
Paving materials.....	67.1	67.6	72.5	58.3	114.6	129.6	135.0	111.2
Roofing materials.....	154.4	155.8	157.2	128.8	313.5	309.8	313.8	237.1
Rubber products.....	203.5	204.7	202.9	172.7	396.3	402.3	385.1	290.1
Rubber tires and inner tubes.....	204.3	207.2	207.0	182.4	363.7	371.5	360.3	272.6
Rubber boots and shoes.....	133.9	132.7	129.6	109.7	276.0	272.6	253.7	203.6
Rubber goods, other.....	148.0	148.7	147.1	126.9	303.4	308.6	292.4	231.8
Miscellaneous industries.....	178.2	182.1	180.8	150.4	354.6	361.2	351.8	271.0
Instruments (professional and scientific), and fire control equipment.....	182.0	184.3	175.9	200.2	329.5	334.6	310.7	330.4
Photographic apparatus.....	146.5	146.8	146.8	127.1	254.1	253.1	253.4	198.7
Optical instruments and ophthalmic goods.....	187.9	188.5	185.7	173.7	344.8	346.3	337.1	295.9
Pianos, organs, and parts.....	137.1	124.7	129.9	88.9	294.8	242.2	270.2	148.5
Games, toys, and dolls ²	115.4	129.9	134.9	94.1	238.4	285.6	298.6	175.5
Buttons.....	91.7	95.5	93.0	87.7	208.0	215.7	211.3	177.6
Fire extinguishers.....	208.8	219.6	213.3	231.3	437.5	438.8	431.9	458.0

¹ These indexes are based on reports from 32,100 cooperating establishments covering 7,165,000 full- and part-time production workers who worked or received pay during any part of any pay period ending nearest the 15th of January 1947. Indexes for the major industry groups have been adjusted to levels indicated by final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency.

² Revisions have been made as follows in the indexes for earlier months: *Steam and hot-water heating apparatus and steam fittings*.—January 1946 pay roll to 238.6. *Trunks and suitcases*.—October 1946 employment to 179.9; pay roll to 353.2. *Games, toys, and dolls*.—October 1946 pay roll to 280.1.

TABLE 3.—Estimated number of employees in selected nonmanufacturing industries¹

Industry group and industry	Estimated number of employees (in thousands)			
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946
Mining: ²				
Anthracite.....	69.1	69.1	68.7	65.7
Bituminous coal.....	336	326	334	338
Metal.....	76.9	76.0	75.2	67.3
Iron.....	26.6	26.5	27.5	22.9
Copper.....	23.8	23.3	22.5	20.5
Lead and zinc.....	16.5	16.1	15.5	14.9
Gold and silver.....	7.8	7.7	7.3	6.7
Miscellaneous.....	2.2	2.4	2.4	2.3
Telephone.....	589	586	583	465
Telegraph.....	39.4	40.4	40.9	42.3
Electric light and power.....	250	252	250	227
Street railways and busses.....	253	252	253	240
Hotels (year-round).....	378	384	388	378
Power laundries.....	(³)	(³)	(³)	(³)
Cleaning and dyeing.....	(³)	(³)	(³)	(³)
Class I steam railroads ⁴	1,334	1,353	1,382	1,393

¹ See footnote 1, table 4.² Data are for production workers only.³ Excludes messengers, and approximately 6,000 employees of general and divisional headquarters and of cable companies.⁴ The change in definition from "wage earner" to "production worker" in the power laundries and cleaning and dyeing industries results in the omission of driver-salesmen. This causes a significant difference in the data. New series are being prepared.⁵ Source: Interstate Commerce Commission.TABLE 4.—Indexes of employment and pay rolls in selected nonmanufacturing industries¹

[1939 average = 100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1946
Mining:								
Anthracite.....	83.4	83.5	82.9	79.3	188.9	212.3	182.3	149.3
Bituminous coal.....	90.8	88.1	90.0	91.2	251.2	258.3	233.1	209.9
Metal.....	87.2	86.2	85.2	76.3	159.7	159.3	146.9	118.0
Iron.....	132.5	132.4	136.1	113.9	236.6	239.7	238.6	170.8
Copper.....	99.9	97.8	94.6	85.9	192.8	192.2	170.0	137.1
Lead and zinc.....	106.1	103.4	99.4	95.6	231.4	220.1	192.1	180.4
Gold and silver.....	31.5	31.0	29.6	27.2	48.4	50.0	44.5	35.6
Miscellaneous.....	54.3	59.6	60.9	56.9	84.7	93.3	99.9	83.7
Quarrying and nonmetallic.....	96.9	99.7	101.2	83.3	204.8	221.9	222.4	160.9
Crude petroleum production ²	92.1	92.6	93.0	90.0	152.6	147.9	151.0	139.0
Public utilities:								
Telephone.....	185.4	184.6	183.4	146.3	266.9	264.5	273.0	205.2
Telegraph.....	104.6	107.4	108.7	112.4	189.1	190.5	194.2	155.3
Electric light and power.....	102.5	103.0	102.5	92.9	159.5	161.6	157.6	133.7
Street railways and busses.....	130.6	130.1	130.6	123.7	216.6	213.6	210.9	181.4
Wholesale trade.....	112.2	114.4	112.7	104.7	189.7	197.2	189.7	161.2
Retail trade.....	110.3	126.5	117.4	104.1	187.7	211.1	191.7	154.9
Food.....	108.5	111.8	108.6	106.6	189.4	194.6	185.7	159.7
General merchandise.....	125.9	171.1	145.2	116.8	213.4	272.4	225.0	165.8
Apparel.....	110.3	135.7	124.1	105.5	188.3	230.6	207.6	163.2
Furniture and housefurnishings.....	84.3	90.4	85.5	70.9	144.1	165.7	148.6	107.1
Automotive.....	95.4	100.2	98.4	85.8	166.7	178.8	169.3	139.0
Lumber and building materials.....	113.4	116.1	115.1	101.9	193.4	200.5	191.9	158.6
Hotels (year-round) ³	117.3	119.1	120.2	117.3	215.1	218.8	218.5	196.4
Power laundries.....	111.0	110.9	109.9	109.3	201.8	201.0	191.5	178.7
Cleaning and dyeing.....	118.2	120.9	123.0	120.3	213.8	219.5	217.0	201.7
Class I steam railroads ⁴	135.1	136.9	139.9	141.1	(⁵)	(⁵)	(⁵)	(⁵)

¹ These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked or received pay during any part of one pay period ending nearest the 15th of January 1947, as follows:

Mining.—2,600 establishments, 369,000 production workers.

Public utilities.—6,600 establishments, 751,000 employees.

Wholesale trade.—10,500 establishments, 303,000 employees.

Retail trade.—34,900 establishments, 907,000 employees.

Hotels (year-round).—1,200 establishments, 131,000 employees.

Power laundries and cleaning and dyeing.—1,500 establishments, 72,000 production workers.

² Does not include well drilling or rig building.³ Cash payments only; additional value of board, room, and tips not included.⁴ Source: Interstate Commerce Commission.⁵ Not available.

Labor Turn-Over in Manufacturing, Mining, and Public Utilities, January 1947

HIRING IN MANUFACTURING during January 1947 recovered from the December seasonal slump. The increase in the rate of hires was greater than the usual seasonal increase and reflected, in part, resumption of full-scale operations after the coal strike.

Increased hires, indicating further gains in industrial employment, were reported for every major manufacturing group except food. The greatest increase occurred in the automobile industry. This was made possible, in large measure, by the increased availability of foundry products and steel. For every 1,000 employees on the automobile industry's pay roll in January, 72 persons were hired.

Job shifting continued to reflect the relatively heavy demand for labor, as 35 out of every 1,000 employees quit their jobs in January. Although this rate is below the level of most of the war years, it is substantially above prewar years.

Lay-offs in manufacturing industries, in general, were only slightly below the December level. In several of the industries in the iron and steel group, however, lay-off rates declined significantly after the termination of the coal strike and the removal of the freight embargo. On the other hand, lay-off rates increased in the aircraft industry, where curtailments resulted in the elimination of third-shift operations and the reduction of other schedules.

Although accession rates were higher for women than for men in all nondurable- and in all but three durable-goods industries, women's quit rates were also relatively higher in these groups. The electrical-machinery industry, which is the largest employer of women in the durable-goods group, continued to have one of the highest hiring rates—69 women were hired for every 1,000 women on the industry pay rolls in January 1947.

TABLE 1.—Monthly labor turn-over rates (per 100 employees) in manufacturing industries¹

Class of turn-over and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total separation:												
1947	² 4.9											
1946	6.8	6.3	6.6	6.3	6.3	5.7	5.8	6.6	6.9	6.3	4.9	4.5
1945	6.2	6.0	6.8	6.6	7.0	7.9	7.7	17.9	12.0	8.6	7.1	5.9
1943	7.1	7.1	7.7	7.5	6.7	7.1	7.6	8.3	8.1	7.0	6.4	6.6
1939	3.2	2.6	3.1	3.5	3.5	3.3	3.3	3.0	2.8	2.9	3.0	3.5
Quit:												
1947	² 3.5											
1946	4.3	3.9	4.2	4.3	4.2	4.0	4.6	5.3	5.3	4.7	3.7	3.0
1945	4.6	4.3	5.0	4.8	4.8	5.1	5.2	6.2	6.7	5.6	4.7	4.0
1943	4.5	4.7	5.4	5.4	4.8	5.2	5.6	6.3	6.3	5.2	4.5	4.4
1939	.9	.6	.8	.8	.7	.7	.7	.8	1.1	.9	.8	.7
Discharge:												
1947	² .4											
1946	.5	.5	.4	.4	.4	.3	.4	.4	.4	.4	.4	.4
1945	.7	.7	.7	.6	.6	.7	.6	.7	.6	.5	.5	.4
1943	.5	.5	.6	.5	.6	.6	.7	.7	.6	.6	.6	.6
1939	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1
Lay-off: ³												
1947	² .9											
1946	1.8	1.7	1.8	1.4	1.5	1.2	.6	.7	1.0	1.0	.7	1.0
1945	.6	.7	.7	.8	1.2	1.7	1.5	10.7	4.5	2.3	1.7	1.3
1943	.7	.5	.5	.6	.5	.5	.5	.5	.5	.5	.7	1.0
1939	2.2	1.9	2.2	2.6	2.7	2.5	2.5	2.1	1.6	1.8	2.0	2.7
Miscellaneous including military: ⁴												
1947	² .1											
1946	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1
1945	.3	.3	.4	.4	.4	.4	.4	.3	.2	.2	.2	.2
1943	1.4	1.4	1.2	1.0	.8	.8	.8	.8	.7	.7	.6	.6
Accession:												
1947	² 6.0											
1946	8.5	6.8	7.1	6.7	6.1	6.7	7.4	7.0	7.1	6.8	5.7	4.3
1945	7.0	5.0	4.9	4.7	5.0	5.9	5.8	5.9	7.4	8.6	8.7	6.9
1943	8.3	7.9	8.3	7.4	7.2	8.4	7.8	7.6	7.7	7.2	6.6	5.2
1939	4.1	3.1	3.3	2.9	3.3	3.9	4.2	5.1	6.2	5.9	4.1	2.8

¹ Month-to-month employment changes as indicated by labor turn-over rates are not precisely comparable to those shown by the Bureau's employment and pay-roll reports, as the former are based on data for the entire month while the latter refer, for the most part, to a one-week period ending nearest the middle of the month. In addition, labor turn-over data, beginning in January 1943, refer to all employees, whereas the employment and pay-roll reports relate only to production workers. The turn-over sample is not so extensive as that of the employment and pay-roll survey—proportionately fewer small plants are included; printing and publishing, and certain seasonal industries, such as canning and preserving, are not covered. Plants on strike are also excluded. For the month of December rates are based on reports from 6,900 establishments, employing 4,532,000 workers.

² Preliminary.

³ Including temporary (of more than 7 days' duration), indeterminate, and permanent lay-offs.

⁴ In 1939 miscellaneous separations were included with quits.

TABLE 2.—Monthly labor turn-over rates (per 100 employees) in selected groups and industries,¹ January 1947²

Group and industry	Total separation		Quit		Discharge		Lay-off		Miscellaneous including military		Total accession	
	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.
Manufacturing												
Durable goods	5.1	4.6	3.4	2.9	0.4	0.4	1.1	1.2	0.2	0.1	6.4	4.4
Nondurable goods	4.9	4.2	3.6	3.1	.4	.3	.8	.7	.1	.1	5.5	4.1
Iron and steel and their products	4.3	4.1	3.3	2.7	.4	.3	.4	.9	.2	.2	5.8	3.5
Blast furnaces, steel works, and rolling mills	3.1	2.9	2.6	2.2	.1	.1	.2	.4	.2	.2	3.8	2.3
Gray-iron castings	7.3	5.8	5.8	4.6	.8	.6	.5	.4	.2	.2	9.8	6.4
Malleable-iron castings	6.4	7.9	5.3	4.4	.6	.5	.2	2.8	.3	.2	8.9	7.9
Steel castings	4.7	4.3	2.8	2.3	.6	.5	1.1	1.3	.2	.2	5.0	2.7
Cast-iron pipe and fittings	4.4	5.0	3.4	3.1	.5	.2	.4	1.6	.1	.1	7.5	5.3
Tin cans and other tinware	5.8	8.4	3.9	3.4	1.1	1.0	.6	3.9	.2	.1	8.3	3.6
Wire products	8.5	3.1	2.7	2.2	.3	.4	.3	.3	.2	.2	4.7	2.6

See footnotes at end of table.

TABLE 2.—Monthly labor turn-over rates (per 100 employees) in selected groups and industries,¹ January 1947²—Continued

Group and industry	Total separation		Quit		Discharge		Lay-off		Miscellaneous including military		Total accession	
	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.
<i>Manufacturing—Continued</i>												
Iron and steel and their products—Con.												
Cutlery and edge tools	6.1	4.9	4.4	3.6	1.3	1.1	0.3	0.1	0.1	0.1	8.7	5.5
Tools (except edge tools, machine tools, files, and saws)	3.8	3.2	3.1	2.2	.4	.4	.2	.4	.1	.2	4.7	3.1
Hardware	5.7	4.5	4.8	3.6	.4	.4	.2	.3	.3	.2	8.0	5.0
Stoves, oil burners, and heating equipment	6.5	10.5	4.5	4.1	1.0	.9	.5	5.2	.5	.3	11.0	9.2
Steam and hot-water-heating apparatus and steam fittings	6.9	4.5	4.8	3.4	.8	.3	1.2	.7	.1	.1	8.7	4.9
Stamped and enameled ware and galvanizing	5.4	5.9	4.2	3.7	.6	.5	.4	1.5	.2	.2	8.0	4.5
Fabricated structural-metal products	4.9	6.7	3.5	3.4	.5	.4	.8	2.7	.1	.2	7.6	5.8
Bolts, nuts, washers, and rivets	3.1	2.6	2.4	2.0	.4	.2	.2	.3	.1	.1	4.9	3.1
Forgings, iron and steel	3.5	4.8	2.3	2.0	.5	.3	.5	2.4	.2	.1	5.5	3.2
Electrical machinery	4.8	3.8	3.5	2.6	.4	.3	.7	.8	.2	.1	5.5	3.6
Electrical equipment for industrial use	3.3	2.6	2.1	1.7	.2	.2	.8	.6	.2	.1	3.9	2.1
Radios, radio equipment, and phonographs	5.7	5.3	4.2	3.3	.7	.6	.7	1.4	.1	(3)	6.8	5.1
Communication equipment, except radios	2.9	2.6	2.5	2.3	.2	.1	.1	.1	.1	.1	4.0	3.4
Machinery, except electrical	4.1	3.8	2.6	2.1	.4	.4	1.0	1.2	.1	.1	5.1	3.5
Engines and turbines	4.5	4.6	2.3	2.2	.6	.4	1.5	1.9	.1	.1	6.3	5.5
Agricultural machinery and tractors	4.2	2.9	3.0	2.3	.4	.3	.7	.2	.1	.1	6.1	3.2
Machine tools	4.1	3.4	1.9	1.4	.3	.3	1.7	1.5	.2	.2	2.5	1.8
Machine-tool accessories	5.3	3.9	2.4	1.8	.7	.3	2.1	1.7	.1	.1	4.0	2.7
Metalworking machinery and equipment, not elsewhere classified	4.1	2.9	3.2	2.3	.3	.4	.5	.1	.1	.1	4.5	2.9
General industrial machinery, except pumps	4.0	3.2	2.7	2.1	.4	.4	.8	.6	.1	.1	4.6	3.1
Pumps and pumping equipment	4.1	3.7	2.7	2.3	.8	.7	.5	.6	.1	.1	5.5	3.5
Transportation equipment, except automobiles	9.6	8.0	3.8	3.1	0.5	0.4	5.2	4.4	0.1	0.1	8.9	7.6
Aircraft	8.2	5.4	3.7	2.5	.3	.3	4.1	2.5	.1	.1	6.6	5.3
Aircraft parts, including engines	5.9	5.3	2.4	2.2	.4	.5	3.0	2.6	.1	(3)	5.2	4.3
Shipbuilding and repairs	13.5	13.3	4.9	4.6	.8	.7	7.7	7.9	.1	.1	13.6	12.9
Automobiles	3.9	3.8	2.7	2.4	.4	.4	.7	.9	.1	.1	7.2	3.8
Motor vehicles, bodies, and trailers	3.9	3.8	2.7	2.4	.3	.4	.8	.9	.1	.1	7.5	3.3
Motor-vehicle parts and accessories	4.0	4.1	2.8	2.5	.5	.4	.5	1.0	.2	.2	6.8	4.8
Nonferrous metals and their products	4.5	4.0	3.2	2.7	.5	.5	.6	.7	.2	.1	5.8	4.2
Primary smelting and refining, except aluminum and magnesium	3.1	3.5	2.2	2.3	.5	.5	.2	.5	.2	.2	4.7	3.1
Rolling and drawing of copper and copper alloys	3.1	2.4	2.6	2.1	.3	.2	.1	.1	.1	(2)	4.2	2.8
Lighting equipment	4.4	3.8	3.4	2.5	.5	.6	.3	.5	.2	.2	10.7	4.9
Nonferrous-metal foundries, except aluminum and magnesium	5.2	4.1	3.4	2.9	.7	.5	.9	.5	.2	.2	5.7	4.2
Lumber and timber basic products	6.5	7.5	4.7	5.2	.4	.4	1.3	1.7	.1	.2	7.2	6.2
Sawmills	6.5	7.8	4.7	5.1	.4	.3	1.3	2.3	.1	.1	6.8	5.8
Planing and plywood mills	4.3	3.9	3.5	2.8	.4	.4	.3	.5	.1	.2	6.1	4.4
Furniture and finished lumber products	7.2	5.2	5.6	4.1	.8	.6	.7	.4	.1	.1	9.7	6.5
Furniture, including mattresses and bedsprings	6.8	5.0	5.1	4.0	.9	.6	.7	.3	.1	.1	9.3	5.8
Stone, clay, and glass products	4.2	3.9	3.2	2.7	.4	.5	.5	.5	.1	.2	4.8	3.9
Glass and glass products	4.1	3.5	2.6	2.0	.5	.5	.8	.8	.2	.2	4.8	3.4
Cement	4.4	4.2	3.6	3.5	.4	.3	.3	.2	.1	.2	4.8	3.9
Brick, tile, and terra cotta	5.4	5.4	4.3	4.0	.6	.7	.4	.5	.1	.2	6.5	5.3
Pottery and related products	3.5	3.6	2.8	3.0	.4	.4	.2	.1	.1	.1	4.0	4.6

See footnotes at end of table.

TABLE 2.—Monthly labor turn-over rates (per 100 employees) in selected groups and industries,¹ January 1947²—Continued

Group and industry	Total separation		Quit		Discharge		Lay-off		Miscellaneous including military		Total accession	
	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.
Manufacturing—Continued												
Textile-mill products.....	5.3	4.0	4.2	3.3	0.4	0.3	0.6	0.3	0.1	0.1	6.1	4.1
Cotton.....	6.5	4.8	5.4	4.1	.4	.3	.6	.3	.1	.1	7.2	4.5
Silk and rayon goods.....	4.4	3.7	3.5	3.1	.4	.3	.4	.2	.1	.1	5.1	3.6
Woolen and worsted, except dyeing and finishing.....	4.5	3.0	3.2	2.2	.3	.3	.8	.4	.2	.1	4.4	3.2
Hosiery, full-fashioned.....	3.1	2.6	2.6	2.1	.1	.2	.4	.3	(³)	(³)	3.8	2.4
Hosiery, seamless.....	4.3	3.2	3.8	2.9	.2	.1	.3	.1	(³)	.1	5.8	3.4
Knitted underwear.....	4.7	3.7	4.1	3.1	.4	.4	.2	.1	(³)	.1	6.5	3.9
Dyeing and finishing textiles, including woolen and worsted.....	3.0	2.4	2.0	1.5	.6	.4	.3	.3	.1	.2	4.1	2.9
Apparel and other finished textile products.....	5.3	4.3	4.3	3.6	.3	.2	.7	.5	(³)	(³)	6.4	4.1
Men's and boys' suits, coats, and overcoats.....	3.9	3.0	3.5	2.5	.2	.2	.2	.3	(³)	(³)	4.9	3.5
Men's and boys' furnishings, work clothing, and allied garments.....	5.0	3.8	4.4	3.6	.2	.1	.4	.1	(³)	(³)	6.7	3.9
Leather and leather products.....	4.5	3.8	3.6	3.1	.3	.2	.5	.5	.1	(³)	5.6	4.5
Leather.....	3.1	3.2	2.3	2.2	.3	.2	.3	.7	.2	.1	4.2	4.2
Boots and shoes.....	4.8	3.8	3.8	3.2	.3	.2	.6	.4	.1	(³)	5.8	4.5
Food and kindred products.....	5.8	5.8	3.9	3.9	.4	.5	1.4	1.3	.1	.1	6.1	6.1
Meat products.....	7.6	8.1	4.5	4.6	.8	.9	2.1	2.3	.2	.3	10.5	10.4
Grain-mill products.....	4.2	5.3	2.9	3.8	.5	.4	.7	.6	.1	.5	6.8	4.1
Tobacco manufactures.....	4.8	4.0	3.6	3.1	.2	.3	.8	.5	.2	.1	5.7	2.8
Paper and allied products.....	4.3	4.0	3.4	3.1	.4	.4	.3	.3	.2	.2	4.6	3.9
Paper and pulp.....	3.4	3.6	2.5	2.6	.4	.4	.3	.4	.2	.2	4.1	3.4
Paper boxes.....	6.7	5.4	5.7	4.6	.5	.6	.3	.1	.2	.1	6.0	5.5
Chemicals and allied products.....	2.7	2.4	1.8	1.4	.3	.3	.5	.6	.1	.1	3.9	2.4
Paints, varnishes, and colors.....	(⁴)	2.4	(⁴)	1.6	(⁴)	.3	(⁴)	.5	(⁴)	(³)	(⁴)	2.1
Rayon and allied products.....	(⁴)	2.6	(⁴)	1.2	(⁴)	.2	(⁴)	1.1	(⁴)	.1	(⁴)	2.1
Industrial chemicals, except explosives.....	2.6	2.3	1.9	1.5	.4	.3	.2	.4	.1	.1	4.5	2.3
Products of petroleum and coal.....	1.4	1.3	.8	.7	.1	.1	.3	.3	.2	.2	1.3	1.0
Petroleum refining.....	1.5	1.3	.8	.7	.1	.1	.4	.3	.2	.2	1.2	.9
Rubber products.....	3.9	3.3	2.9	2.6	.3	.3	.6	.3	.1	.1	4.6	3.1
Rubber tires and inner tubes.....	2.7	2.5	2.1	2.0	.2	.2	.3	.2	.1	.1	2.4	2.0
Rubber footwear and related products.....	6.6	4.1	4.9	3.7	.3	.3	1.3	(³)	.1	.1	8.0	5.1
Miscellaneous rubber industries.....	5.1	4.6	3.6	3.2	.6	.5	.8	.7	.1	.2	7.5	4.4
Miscellaneous industries.....	4.8	3.9	2.9	2.2	.5	.4	1.2	1.2	.2	.1	5.3	3.0
Nonmanufacturing												
Metal mining ¹	5.2	5.1	3.9	3.4	.4	.4	.7	1.1	.2	.2	7.2	5.6
Iron-ore.....	3.0	3.8	1.6	1.5	.2	.1	.8	1.8	.4	.4	4.0	2.1
Copper-ore.....	6.8	5.3	5.3	4.4	.6	.6	.8	.2	.1	.1	9.4	8.1
Lead- and zinc-ore.....	4.9	4.5	3.9	3.6	.3	.3	.5	.4	.2	.2	6.5	6.8
Coal mining: ¹	2.1	1.6	1.4	1.2	.1	(³)	.5	.3	.1	.1	2.5	1.7
Anthracite mining.....	3.3	(⁴)	2.9	(⁴)	.1	(⁴)	.2	(⁴)	.1	(⁴)	4.3	(⁴)
Bituminous-coal mining.....												
Public utilities:												
Telephone.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Telegraph.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)

¹ Since January 1943 manufacturing firms reporting labor turn-over have been assigned industry codes on the basis of current products. Most plants in the employment and pay-roll sample comprising those which were in operation in 1939, are classified according to their major activity at that time, regardless of any subsequent change in major products.

² Preliminary.

³ Less than 0.05.

⁴ Not available.

¹ For the month of December rates for mining industries are based on reports from 188 establishments employing 97,600 persons.

TABLE 3.—Monthly labor turn-over rates for men and women in all manufacturing and selected groups,¹ January 1947²

Industry group	Men's rates (per 100 men)						Women's rates (per 100 women)					
	Total separation		Quit		Accession		Total separation		Quit		Accession	
	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.
All manufacturing.....	4.6	4.2	3.0	2.7	5.6	4.3	6.0	4.8	4.8	3.7	6.7	4.2
Durable goods.....	5.0	4.6	3.3	2.8	6.3	4.5	5.7	4.7	4.3	3.3	6.3	3.8
Nondurable goods.....	4.0	3.6	2.7	2.4	4.7	3.9	6.1	4.8	4.9	3.9	6.8	4.3
Iron and steel and their products.....	4.4	4.2	3.3	2.7	6.0	3.7	5.2	4.7	4.2	3.2	6.5	3.6
Electrical machinery.....	3.6	3.0	2.5	2.0	4.6	3.3	6.7	5.2	5.2	3.7	6.9	4.2
Machinery, except electrical.....	4.0	3.7	2.4	1.8	4.9	3.5	4.8	3.8	3.4	3.3	5.3	3.5
Transportation equipment except automobiles.....	9.6	8.0	3.6	3.2	9.1	7.9	6.0	5.1	3.4	2.5	4.3	3.6
Automobiles.....	3.9	3.7	2.5	2.3	6.0	3.5	4.8	4.4	3.0	2.3	7.8	4.0
Nonferrous metals and their products.....	4.2	4.0	3.0	2.6	5.6	4.4	5.3	4.0	4.0	2.9	6.6	3.5
Lumber and timber basic products.....	6.5	7.4	4.8	5.2	7.5	6.4	6.1	5.5	3.3	4.4	3.4	3.4
Furniture and finished lumber products.....	7.2	5.1	5.6	4.1	10.0	6.8	7.1	5.6	5.5	4.4	8.1	4.9
Stone, clay, and glass products.....	4.1	3.7	3.0	2.7	4.7	3.9	4.9	4.4	3.9	3.0	5.3	3.7
Textile-mill products.....	4.9	3.7	3.9	2.9	6.0	4.3	5.7	4.2	4.7	3.7	6.4	3.8
Apparel and other finished textile products.....	4.0	3.1	2.5	2.5	5.0	3.6	5.3	4.3	4.6	3.7	6.6	4.0
Leather and leather products.....	3.9	3.1	2.9	2.5	4.6	4.2	5.7	4.7	4.9	4.1	6.8	5.0
Food and kindred products.....	4.9	5.1	3.0	3.2	5.2	5.6	10.2	7.5	7.8	5.6	9.6	7.3
Tobacco manufactures.....	3.7	3.2	2.2	2.1	4.0	2.6	5.2	4.4	4.3	3.6	6.6	3.0
Paper and allied products.....	3.6	3.7	2.8	2.7	4.4	3.9	6.3	5.2	5.3	4.5	5.3	4.0
Chemicals and allied products.....	2.4	2.2	1.6	1.2	3.7	2.2	4.1	3.3	2.8	2.4	4.7	2.9
Products of petroleum and coal.....	1.3	1.3	.7	.7	1.2	.9	3.1	3.0	2.7	2.1	2.1	2.6
Rubber products.....	3.3	2.9	2.4	2.2	3.9	2.9	5.5	4.6	4.2	3.6	6.8	3.7
Miscellaneous industries.....	4.1	3.3	2.2	1.8	4.4	3.0	5.7	4.9	3.9	3.0	6.8	3.1

¹ These figures are based on a slightly smaller sample than that for all employees, inasmuch as some firms do not report separate data for women. Rates for December are based on 6,800 reports covering 4,317,000 employees.

² Preliminary figures.

Trends of Earnings and Hours

Summary of Earnings and Hours Data for January 1947

AVERAGE WEEKLY EARNINGS of production workers in manufacturing industries in February 1947 remained at the \$47 level for the third successive month, according to preliminary estimates. The continued upward trend of hourly earnings more than offset the decline in the workweek.

Preliminary averages for February 1947 are as follows:

	<i>Weekly earnings</i>	<i>Weekly hours</i>	<i>Hourly earnings (in cents)</i>
All manufacturing.....	\$47. 28	40. 4	117. 0
Durable goods.....	49. 72	40. 4	122. 9
Nondurable goods.....	44. 69	40. 4	110. 6

Final figures indicate that average weekly earnings in manufacturing industries advanced between December 1946 and January 1947, despite holiday closings and plant shut-downs for year-end inventory taking. Among the nonmanufacturing industries bituminous-coal mining maintained the lead, with average weekly earnings of \$70, and earnings in anthracite mining and security brokerage remained over \$62 a week.

Increased coal and raw materials, permitted fuller production schedules in heavy manufacturing industries. Of these, blast furnaces and cast iron pipe in the iron and steel group, reported increases in weekly earnings of \$2.37 and \$3.12. Other sizable increases since December occurred in two consumers' durable goods industries—refrigerators, \$4.03, and washing machines, \$1.86.

Among the nondurable goods industries, the largest increase occurred in slaughtering and meat packing. Wage rate increases and considerable overtime were responsible for the record weekly earnings, averaging \$57.38, a gain of \$5.65 a week more than in December.

Over the year, average earnings of production workers in manufacturing industries increased over 15 cents an hour and almost \$6 or 14 percent a week. During the same period consumer prices rose 18 percent. All major industrial groups reported increases in both average hourly and weekly earnings. The greatest percentage increases in weekly earnings—amounting to over 20 percent—

occurred in the lumber and textile groups, but in January 1947, they still averaged under \$40 a week.

Earnings and hours in manufacturing and nonmanufacturing industries, January 1947

MANUFACTURING

Industry group and industry	Average weekly earnings ¹			Average weekly hours ¹			Average hourly earnings ¹		
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946
All manufacturing.....	\$46.94	\$46.86	\$45.79	40.5	40.9	40.2	<i>Cents</i> 115.8	<i>Cents</i> 114.5	<i>Cents</i> 113.9
Durable goods.....	49.47	49.46	48.62	40.5	40.8	40.2	122.2	121.3	121.0
Nondurable goods.....	44.33	44.15	42.87	40.6	41.0	40.3	109.2	107.6	106.5
<i>Durable goods</i>									
Iron and steel and their products.....	50.63	49.67	49.91	40.1	39.8	40.0	126.2	124.8	124.7
Blast furnaces, steel works, and rolling mills.....	50.96	48.59	50.82	38.2	37.0	38.8	133.3	131.4	131.0
Gray-iron and semisteel castings.....	54.43	53.98	52.78	42.7	42.6	41.8	127.5	126.6	126.3
Malleable-iron castings.....	53.13	51.75	51.74	41.0	40.6	40.4	128.8	127.7	123.2
Steel castings.....	50.68	51.72	51.87	39.0	39.8	39.9	129.8	130.0	129.8
Cast-iron pipe and fittings.....	49.32	46.20	45.92	43.6	41.8	43.0	112.8	110.4	106.7
Tin cans and other tinware.....	44.03	44.79	42.68	40.0	40.8	39.1	111.2	110.4	109.7
Wirework.....	50.05	49.28	48.94	41.3	41.0	40.6	121.3	120.2	120.5
Cutlery and edge tools.....	47.19	47.50	46.41	42.7	43.3	42.7	110.4	109.5	108.6
Tools (except edge tools, machine tools, tools, files, and saws).....	50.39	50.02	49.03	43.3	43.3	42.4	116.4	115.6	115.8
Hardware.....	46.41	46.42	45.65	41.6	41.7	41.3	111.9	111.3	110.6
Plumbers' supplies.....	51.27	49.68	48.06	42.3	41.4	40.7	121.9	120.2	118.3
Stoves, oil burners, and heating equipment not elsewhere classified.....	50.25	49.61	48.64	40.9	41.3	40.6	123.0	120.1	119.9
Steam and hot-water heating apparatus and steam fittings.....	49.73	48.78	50.83	40.4	39.9	40.6	123.0	122.2	125.3
Stamped and enameled ware and galvanizing.....	47.61	48.30	46.10	40.5	41.1	39.7	117.6	117.6	116.1
Fabricated structural and ornamental metalwork.....	49.82	51.10	48.06	40.5	41.7	39.6	122.9	122.5	121.3
Metal doors, sash, frames, molding, and trim.....	52.68	53.54	51.45	42.0	42.8	40.8	125.5	124.9	126.1
Bolts, nuts, washers, and rivets.....	48.78	48.76	48.87	40.2	40.8	41.0	120.9	119.2	118.9
Forgings, iron and steel.....	59.01	58.04	56.22	41.3	40.9	40.1	143.0	141.8	140.1
Screw-machine products and wood screws.....	52.22	51.80	51.50	42.7	42.8	42.5	122.4	121.0	121.2
Steel barrels, kegs, and drums.....	49.44	50.68	50.16	39.9	42.8	42.3	123.4	118.3	118.5
Firearms.....	52.67	53.37	52.89	40.0	40.5	40.7	131.8	131.8	130.1
Electrical machinery.....	48.66	49.27	48.33	40.5	41.1	40.6	120.2	119.8	119.1
Electrical equipment.....	49.79	49.91	49.12	40.3	40.7	40.2	123.2	122.6	122.1
Radios and phonographs.....	42.42	44.74	43.42	39.4	40.9	40.3	108.4	109.4	107.6
Communication equipment.....	51.21	51.89	50.48	42.1	42.7	42.0	121.6	121.0	120.3
Machinery, except electrical.....	53.10	52.87	52.06	41.4	41.4	40.9	128.3	127.7	127.3
Machinery and machine-shop products.....	52.99	52.62	51.38	41.8	41.8	41.1	126.2	125.7	124.9
Engines and turbines.....	56.08	56.88	55.57	41.0	41.5	40.5	136.8	137.1	137.0
Tractors.....	51.96	51.99	52.53	39.5	40.1	40.3	131.5	129.7	130.4
Agricultural machinery, excluding tractors.....	50.19	50.31	50.09	39.9	39.8	39.8	126.9	127.2	126.8
Machine tools.....	56.17	56.66	55.90	42.2	42.8	42.3	132.6	132.2	132.2
Machine-tool accessories.....	58.43	59.71	58.08	42.5	43.2	42.1	137.9	138.1	138.0
Textile machinery.....	51.98	50.94	49.60	42.4	42.6	41.8	122.7	119.7	118.6
Typewriters.....	47.66	47.41	49.98	40.8	40.6	42.1	116.5	116.9	116.5
Cash registers, adding and calculating machines.....	57.16	56.37	58.42	41.1	40.6	41.8	140.4	139.5	140.6
Washing machines, wringers and driers, domestic.....	49.84	47.98	45.76	42.2	41.4	39.6	118.1	115.9	115.5
Sewing machines, domestic and industrial.....	54.08	54.19	52.63	41.7	41.8	40.8	130.1	129.7	129.1
Refrigerators and refrigeration equipment.....	51.59	47.56	47.67	40.4	38.1	38.4	126.7	124.9	124.1
Transportation equipment, except automobiles.....	54.58	55.42	52.37	40.3	40.7	38.4	135.5	136.2	136.4
Locomotives.....	55.64	59.99	57.22	39.8	41.5	39.9	139.7	144.5	143.3
Cars, electric and steam-railroad.....	53.47	52.64	52.46	41.8	41.8	41.2	128.0	126.0	127.2
Aircraft and parts, excluding aircraft engines.....	52.87	53.53	52.53	39.9	40.4	39.6	132.0	132.7	132.6
Aircraft engines.....	56.28	56.89	51.06	41.4	41.9	37.2	135.8	135.7	137.3
Shipbuilding and boatbuilding.....	56.98	57.21	51.47	39.9	40.0	35.7	142.1	143.0	144.1
Motorcycles, bicycles, and parts.....	49.84	55.23	52.39	40.2	43.2	41.2	123.5	127.8	127.0

See footnotes at end of table.

Earnings and hours in manufacturing and nonmanufacturing industries, January 1947—Continued

MANUFACTURING—Continued

Industry group and industry	Average weekly earnings ¹			Average weekly hours ¹			Average hourly earnings ¹		
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946
<i>Durable goods—Continued</i>							<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Automobiles.....	\$54.00	\$54.99	\$53.83	38.9	39.4	38.6	138.9	139.4	139.4
Nonferrous metals and their products.....	49.98	50.33	49.24	41.1	41.6	40.9	121.7	120.9	120.4
Smelting and refining, primary, of non-ferrous metals.....	49.19	49.77	48.25	40.5	41.0	39.8	122.2	121.5	121.2
Alloying and rolling and drawing of non-ferrous metals except aluminum.....	53.73	53.69	52.21	41.4	41.7	40.6	129.4	128.6	128.7
Clocks and watches.....	43.94	45.41	45.46	39.7	41.2	41.6	110.6	109.9	109.3
Jewelry (precious metals) and jewelers' findings.....	48.71	51.54	49.31	42.2	44.3	42.6	114.1	114.9	114.9
Silverware and plated ware.....	57.58	58.27	55.70	45.9	46.8	45.2	125.2	124.9	123.4
Lighting equipment.....	47.48	46.31	47.13	39.8	39.5	40.0	119.5	117.9	117.8
Aluminum manufactures.....	49.14	49.23	48.15	40.5	40.7	40.0	121.3	120.9	120.4
Lumber and timber basic products.....	39.16	38.79	37.74	40.7	41.7	40.6	96.3	93.1	93.1
Sawmills and logging camps.....	37.52	37.05	36.37	40.1	41.1	40.2	93.6	90.1	90.6
Planing and plywood mills.....	44.01	44.12	41.86	42.4	43.4	41.8	103.8	101.4	100.4
Furniture and finished lumber products.....	42.34	42.49	41.62	41.7	42.2	41.7	101.5	100.7	99.9
Furniture.....	43.12	43.04	42.41	41.4	41.6	41.4	104.5	103.4	102.4
Caskets and other morticians' goods.....	44.79	44.59	42.66	42.3	43.0	41.5	105.0	103.1	102.5
Wood preserving.....	38.67	39.53	38.90	41.1	42.6	41.8	94.5	93.2	93.1
Stone, clay, and glass products.....	45.43	45.88	44.91	40.4	41.0	40.3	112.5	111.9	111.4
Glass and glassware.....	47.93	47.96	46.72	39.5	39.9	39.2	121.1	120.3	119.4
Glass products made from purchased glass.....	42.37	42.54	41.35	42.0	41.9	41.2	99.3	99.8	97.7
Cement.....	43.79	46.12	46.18	40.6	42.4	42.2	107.9	109.0	109.5
Brick, tile, and terra cotta.....	42.02	42.57	42.08	40.2	40.7	40.3	103.8	104.0	103.5
Pottery and related products.....	41.97	42.82	41.56	37.7	38.6	37.9	112.1	111.0	110.0
Gypsum ²	51.49	51.30	50.89	46.2	46.8	46.2	111.4	109.9	110.2
Lime.....	43.83	46.43	45.69	44.4	46.8	46.2	98.0	98.1	98.8
Marble, granite, slate, and other products.....	43.95	44.26	42.76	41.9	42.4	41.6	105.0	104.9	103.4
Abrasives.....	52.08	50.38	48.45	41.9	41.6	39.9	123.5	121.2	121.4
Asbestos products.....	51.77	50.79	50.18	42.9	42.7	41.9	120.0	118.8	119.8
<i>Nondurable goods</i>									
Textile-mill products and other fiber manufactures.....	39.29	39.26	38.38	40.5	40.9	40.2	97.0	95.9	95.5
Cotton manufactures, except smallwares.....	37.06	36.85	36.14	40.6	40.9	40.3	91.4	90.0	89.8
Cotton smallwares.....	40.48	39.64	38.09	41.0	41.0	39.7	98.0	96.7	96.1
Silk and rayon goods.....	40.16	39.57	38.09	41.1	41.8	41.1	97.5	94.4	94.1
Woolen and worsted manufactures, except dyeing and finishing.....	43.10	42.96	41.67	41.3	41.3	40.1	104.5	103.9	103.8
Hosiery.....	38.55	38.93	38.20	38.1	38.7	38.4	101.1	100.6	99.5
Knitted cloth.....	39.01	39.26	39.99	41.1	40.2	40.9	94.8	97.2	96.7
Knitted outerwear and knitted gloves.....	36.49	36.74	37.14	38.4	39.2	39.5	94.4	92.8	93.0
Knitted underwear.....	34.07	34.26	33.31	38.6	39.3	38.7	86.9	86.8	85.9
Dyeing and finishing textiles, including woolen and worsted.....	45.66	45.46	43.54	43.1	43.6	42.2	105.0	104.3	103.3
Carpets and rugs, wool.....	46.51	47.86	46.83	40.7	41.8	41.2	114.5	114.7	113.9
Hats, fur-felt.....	50.15	53.70	52.83	39.1	41.3	40.2	127.7	129.9	130.9
Jute goods, except felts.....	40.00	40.57	39.68	43.9	44.4	43.8	92.8	92.9	92.0
Cordage and twine.....	39.14	39.08	37.94	41.1	41.4	40.3	95.1	94.4	94.3
Apparel and other finished textile products.....	38.11	37.23	36.54	36.7	37.0	36.6	103.7	100.6	99.8
Men's clothing, not elsewhere classified.....	41.58	41.78	41.39	37.5	38.1	37.8	109.2	108.9	108.6
Shirts, collars, and nightwear.....	32.41	33.22	32.04	37.4	38.1	37.6	86.9	86.8	84.7
Underwear and neckwear, men's.....	33.54	33.68	34.78	36.7	36.9	38.6	91.5	91.3	90.1
Work shirts.....	25.43	26.72	26.01	34.7	36.9	36.6	73.1	72.4	71.2
Women's clothing, not elsewhere classified.....	47.58	44.14	43.28	35.6	35.3	34.9	129.5	122.3	121.1
Corsets and allied garments.....	35.24	35.39	35.29	37.8	38.6	38.4	92.8	91.7	91.9
Millinery.....	43.38	38.69	35.97	32.1	30.5	28.7	110.9	104.6	104.6
Handkerchiefs.....	28.95	31.83	30.89	35.3	38.2	37.0	82.1	83.6	83.7
Curtains, draperies, and bedspreads.....	28.14	28.88	29.52	34.0	35.0	36.1	82.5	82.8	82.3
Housefurnishings other than curtains, etc.....	34.68	35.83	35.91	38.1	39.6	39.4	90.6	90.2	90.5
Textile bags.....	35.88	34.68	33.29	42.6	42.1	40.0	84.3	82.4	83.1

See footnotes at end of table.

Earnings and hours in manufacturing and nonmanufacturing industries, January 1947—
Continued

MANUFACTURING—Continued

Industry group and industry	Average weekly earnings ¹			Average weekly hours ¹			Average hourly earnings ¹		
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946
<i>Nondurable goods—Continued</i>									
Leather and leather products.....	\$40.15	\$39.83	\$37.24	39.2	39.1	37.1	Cents 102.5	Cents 101.8	Cents 100.4
Leather.....	48.49	47.71	45.98	41.3	41.6	40.2	117.4	115.0	114.4
Boot and shoe cut stock and findings.....	37.84	37.32	35.78	38.8	38.7	37.4	98.0	97.0	96.1
Boots and shoes.....	38.86	38.65	35.76	39.1	38.8	36.3	99.8	99.5	97.8
Leather gloves and mittens.....	32.13	32.16	32.69	34.9	35.5	35.7	91.8	91.0	92.3
Trunks and suitcases.....	39.74	41.70	40.62	38.2	40.1	39.7	104.1	103.4	102.0
Food.....	47.27	46.93	44.84	43.6	44.4	42.9	108.3	105.8	104.6
Slaughtering and meat packing.....	57.38	51.73	51.15	47.6	46.4	44.9	120.3	111.9	113.7
Butter.....	42.56	42.29	40.09	45.7	46.9	44.7	93.4	90.7	89.5
Condensed and evaporated milk.....	46.32	44.50	43.16	46.6	46.5	46.3	99.5	95.7	93.3
Ice cream.....	48.91	48.84	46.86	46.7	46.6	46.0	100.3	100.4	97.6
Flour.....	54.97	54.58	51.77	49.9	50.4	48.2	110.1	108.5	107.5
Cereal preparations.....	48.48	47.81	47.12	40.5	40.9	40.7	119.6	117.0	115.7
Baking.....	46.32	47.55	46.01	43.9	45.3	44.0	105.6	105.1	104.5
Sugar refining, cane.....	38.38	44.70	38.90	38.0	43.1	39.1	101.0	103.7	99.6
Sugar, beet.....	44.34	54.35	49.59	40.5	52.1	48.6	109.5	104.4	102.1
Confectionery.....	37.06	38.19	36.79	39.8	41.4	39.8	91.4	90.2	90.5
Beverages, nonalcoholic.....	41.29	41.37	39.66	42.9	43.2	42.4	95.7	94.9	92.8
Malt liquors.....	57.26	59.79	56.68	41.8	43.8	42.5	136.2	136.5	133.3
Canning and preserving.....	36.55	37.93	35.28	37.6	38.8	37.3	97.5	98.2	95.0
Tobacco manufactures.....	36.82	38.12	36.66	39.3	40.2	39.7	93.7	94.7	92.4
Cigarettes.....	41.36	43.26	41.74	39.7	41.0	41.1	104.1	105.6	101.5
Cigars.....	33.88	34.85	33.27	39.2	39.9	38.6	86.1	87.1	85.7
Tobacco (chewing and smoking) and snuff.....	33.16	34.25	33.58	37.6	39.1	39.2	88.3	87.7	85.7
Paper and allied products.....	46.89	46.87	46.08	43.2	43.7	43.3	108.5	107.1	106.4
Paper and pulp.....	50.12	49.92	49.37	44.2	44.6	44.4	112.9	111.9	111.1
Envelopes.....	44.68	44.51	43.98	42.8	43.0	42.6	104.3	103.5	103.1
Paper bags.....	40.93	40.37	38.78	40.3	40.9	40.1	101.0	98.2	97.0
Paper boxes.....	43.58	43.61	42.74	42.3	43.2	42.4	103.0	101.2	100.9
Printing, publishing, and allied industries.....	56.50	57.03	55.11	41.0	41.5	41.0	137.9	137.4	134.3
Newspapers and periodicals.....	62.28	62.95	61.11	39.1	39.3	39.3	157.2	156.9	152.8
Printing, book and job.....	53.84	54.77	52.60	41.8	42.6	41.9	129.5	129.2	125.9
Lithographing.....	57.58	57.55	55.76	43.5	44.1	42.9	132.3	130.6	129.9
Chemicals and allied products.....	47.36	47.13	45.88	41.4	41.6	41.3	114.3	113.3	111.2
Paints, varnishes, and colors.....	49.69	49.17	48.16	42.1	42.2	41.8	118.1	116.6	115.4
Drugs, medicines, and insecticides.....	41.88	42.01	41.06	40.4	40.6	40.2	103.7	103.5	101.9
Soap.....	52.90	52.93	48.08	42.7	43.3	40.8	124.0	122.2	117.9
Rayon and allied products.....	44.26	43.76	43.31	39.6	39.2	39.1	111.9	111.7	110.7
Chemicals, not elsewhere classified.....	54.74	54.15	52.96	41.3	41.2	41.1	132.6	131.6	128.8
Explosives and safety fuses.....	53.08	51.68	49.53	41.0	40.7	39.8	129.5	127.0	124.3
Ammunition, small-arms.....	48.14	47.38	46.98	41.5	41.2	40.9	116.1	115.0	114.8
Cottonseed oil.....	35.91	36.52	35.14	51.8	53.2	52.6	69.3	68.5	66.8
Fertilizers.....	33.44	34.64	32.97	41.3	42.1	40.1	81.0	82.4	82.1
Products of petroleum and coal.....	55.69	55.11	54.50	40.2	40.1	40.3	138.4	137.5	135.1
Petroleum refining.....	58.02	58.55	57.11	40.0	40.4	40.0	146.3	145.1	142.9
Coke and byproducts.....	47.66	43.59	46.64	39.4	36.7	39.5	121.4	119.0	117.7
Roofing materials.....	51.99	50.92	51.10	44.6	44.1	44.4	116.7	115.6	115.0
Rubber products.....	54.26	54.69	52.93	40.7	41.1	40.0	133.2	132.9	132.2
Rubber tires and inner tubes.....	60.00	60.55	58.87	39.7	40.0	39.0	150.9	150.9	150.3
Rubber boots and shoes.....	46.06	45.93	43.80	41.9	42.0	40.4	109.9	109.3	108.3
Rubber goods, other.....	48.18	48.68	46.74	41.9	42.6	41.4	115.1	114.3	113.0
Miscellaneous industries.....	45.89	45.85	45.08	41.0	41.6	41.1	111.9	110.3	109.8
Instruments (professional and scientific), and fire control equipment.....	52.00	52.20	51.01	40.1	40.7	40.1	127.3	126.9	125.8
Pianos, organs, and parts.....	53.07	47.65	50.95	42.4	40.5	42.8	125.7	118.0	119.5

See footnotes at end of table.

Earnings and hours in manufacturing and nonmanufacturing industries, January 1947—Continued

NONMANUFACTURING

Industry group and industry	Average weekly earnings ¹			Average weekly hours ¹			Average hourly earnings ¹		
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946
Mining:							<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Anthracite	\$62.58	\$65.80	\$56.57	39.4	40.7	35.7	158.9	161.3	158.2
Bituminous coal	69.58	69.56	61.54	46.7	46.7	41.7	149.0	149.1	147.7
Metal	51.47	52.02	48.59	41.9	42.2	39.9	122.8	123.2	121.9
Iron	47.21	47.89	46.36	39.7	39.7	38.4	119.0	120.7	120.7
Copper	54.77	55.46	50.71	44.4	45.1	41.7	122.5	122.9	121.7
Lead and zinc	54.63	53.69	48.63	42.7	42.3	39.5	127.9	126.8	123.2
Quarrying and nonmetallic	45.43	48.07	47.40	43.3	45.8	45.4	106.0	105.2	104.5
Crude petroleum production	55.61	53.42	54.25	41.3	39.5	40.4	134.3	135.3	133.4
Public utilities:									
Telephone	43.19	42.98	44.40	38.5	38.0	39.3	113.3	113.2	113.1
Telegraph ²	46.83	45.94	46.25	43.8	43.2	43.5	106.9	106.2	106.3
Electric light and power	54.11	54.58	53.61	41.9	41.4	41.6	131.3	133.7	130.2
Street railways and busses	56.22	55.26	54.64	47.7	47.9	47.3	116.5	114.2	112.5
Trade:									
Wholesale	50.05	51.20	49.80	41.5	42.3	41.6	119.7	120.2	118.6
Retail	34.40	33.73	33.04	39.9	40.2	39.7	95.1	91.9	91.7
Food	41.50	41.19	40.42	40.0	40.7	40.3	101.1	97.8	97.2
General merchandise	30.13	28.29	27.63	36.1	36.0	35.5	80.1	76.5	76.0
Apparel	35.89	35.52	34.74	36.9	37.0	36.4	96.4	97.1	96.2
Furniture and housefurnishings	45.86	49.39	47.26	42.1	43.7	43.6	112.2	115.6	110.1
Automotive	49.01	50.61	48.74	45.6	47.2	46.1	109.5	109.3	108.7
Lumber and building materials	44.30	44.78	43.32	43.0	43.5	42.3	104.4	103.8	104.0
Hotels (year-round) ⁴	28.62	28.40	28.15	43.8	43.7	43.8	64.8	65.1	64.2
Power laundries	32.46	32.13	31.05	43.3	43.5	42.6	74.5	73.9	72.9
Cleaning and dyeing	36.29	36.50	35.32	42.3	42.8	41.9	87.4	86.7	85.4
Security brokerage	63.83	64.48	62.00	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
Insurance	52.00	52.25	51.24	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)

¹ These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked or received pay during any part of one pay period ending nearest the 15th of January 1947. The figures shown below relate to firms reporting man-hour data in all cases except security brokerage and insurance; weekly earnings are based on a slightly larger sample (see footnote 1 in tables 1 and 4).

Manufacturing.—31,000 establishments, 7,037,000 production workers.

Mining.—2,400 establishments, 333,000 production workers.

Public utilities.—6,300 establishments, 671,000 employees.

Wholesale trade.—8,100 establishments, 228,000 employees.

Retail trade.—25,600 establishments, 656,000 employees.

Hotels (year-round).—900 establishments, 78,000 employees.

Power laundries and cleaning and dyeing.—1,300 establishments, 60,000 production workers.

Security brokerage and insurance.—2,800 establishments, 112,000 employees. For manufacturing, mining, power laundries, and cleaning and dyeing industries, the data relate to production workers only. For the remaining industries the data relate to all employees except high paid executives and officials.

Data for the current and immediately preceding months are subject to revision.

Revisions have been made as follows in the data for earlier months:

Gypsum.—October 1946 to \$52.04, 47.8 hours, and 108.8 cents.

² Excludes messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies.

⁴ Cash payments only; additional value of board, room, and tips, not included.

⁵ Not available.

Trend of Factory Earnings, 1939 to January 1947

AVERAGE EARNINGS of factory workers, summarized in the accompanying table for selected months from January 1939 to January 1947,¹ are on a gross basis (i. e., before deductions for social security, income taxes, bond purchases, etc.).

Weekly earnings in all manufacturing averaged \$46.94 in January 1947—102.4 percent above the average in January 1939, 76.2 percent above January 1941, and 20.7 percent above October 1942. Weekly earnings for January 1947 increased 14.1 percent above January 1946. However, the average weekly earnings are still below the wartime peak of \$47.50 in January 1945, as the result of shorter working hours and shifts of workers from the high paid war industries to the lower paid consumer goods industries.

Gross hourly earnings in all manufacturing averaged 115.8 cents in January 1947—83.2 percent above the average in January 1939, 69.5 percent above January 1941, and 29.7 percent above October 1942.

Average hourly earnings exclusive of overtime, as shown in columns 7 to 9, are weighted by man-hours of employment in the major divisions of manufacturing for January 1941. Overtime is defined as work in excess of 40 hours per week and paid for at time and one-half. The method of estimating average hourly earnings exclusive of overtime makes no allowance for special rates of pay for work done on major holidays or the effect of extra pay for work on supplementary shifts. For all manufacturing, the average hourly earnings, exclusive of overtime, in January 1947 were 112.0 cents per hour—74.7 percent above January 1939, 68.7 percent above January 1941, and 38.8 percent above October 1942.

¹ Compare Trends in Factory Wages, 1939-43, in Monthly Labor Review, November 1943 (p. 869), especially table 4 (p. 879). For detailed data regarding weekly earnings, see preceding table.

Earnings and hours in manufacturing and nonmanufacturing industries, January 1947—Continued

NONMANUFACTURING

Industry group and industry	Average weekly earnings ¹			Average weekly hours ¹			Average hourly earnings ¹		
	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946	Jan. 1947	Dec. 1946	Nov. 1946
Mining:							Cents	Cents	Cents
Anthracite	\$62.58	\$65.80	\$56.57	39.4	40.7	35.7	158.9	161.3	158.2
Bituminous coal	69.58	69.56	61.54	46.7	46.7	41.7	149.0	149.1	147.7
Metal	51.47	52.02	48.59	41.9	42.2	39.9	122.8	123.2	121.9
Iron	47.21	47.89	46.36	39.7	39.7	38.4	119.0	120.7	120.7
Copper	54.77	55.46	50.71	44.4	45.1	41.7	122.5	122.9	121.7
Lead and zinc	54.63	53.69	48.63	42.7	42.3	39.5	127.9	126.8	123.2
Quarrying and nonmetallic	45.43	48.07	47.40	43.3	45.8	45.4	106.0	105.2	104.5
Crude petroleum production	55.61	53.42	54.25	41.3	39.5	40.4	134.3	135.3	133.4
Public utilities:									
Telephone	43.19	42.98	44.40	38.5	38.0	39.3	113.3	113.2	113.1
Telegraph	46.83	45.94	46.25	43.8	43.2	43.5	106.9	106.2	106.3
Electric light and power	54.11	54.58	53.61	41.9	41.4	41.6	131.3	133.7	130.2
Street railways and busses	56.22	55.26	54.64	47.7	47.9	47.3	116.5	114.2	112.5
Trade:									
Wholesale	50.05	51.20	49.80	41.5	42.3	41.6	119.7	120.2	118.6
Retail	34.40	33.73	33.04	39.9	40.2	39.7	95.1	91.9	91.7
Food	41.50	41.19	40.42	40.0	40.7	40.3	101.1	97.8	97.2
General merchandise	30.13	28.29	27.63	36.1	36.0	35.5	80.1	76.5	76.0
Apparel	35.89	35.52	34.74	36.9	37.0	36.4	96.4	97.1	96.2
Furniture and housefurnishings	45.86	49.39	47.26	42.1	43.7	43.6	112.2	115.6	110.1
Automotive	49.01	50.61	48.74	45.6	47.2	46.1	109.5	109.3	108.7
Lumber and building materials	44.30	44.78	43.32	43.0	43.5	42.3	104.4	103.8	104.0
Hotels (year-round) ⁴	28.62	28.40	28.15	43.8	43.7	43.8	64.8	65.1	64.2
Power laundries	32.46	32.13	31.05	43.3	43.5	42.6	74.5	73.9	72.9
Cleaning and dyeing	36.29	36.50	35.32	42.3	42.8	41.9	87.4	86.7	85.4
Security brokerage	63.83	64.48	62.00	(9)	(9)	(9)	(9)	(9)	(9)
Insurance	52.00	52.25	51.24	(9)	(9)	(9)	(9)	(9)	(9)

¹ These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked or received pay during any part of one pay period ending nearest the 15th of January 1947. The figures shown below relate to firms reporting man-hour data in all cases except security brokerage and insurance; weekly earnings are based on a slightly larger sample (see footnote 1 in tables 1 and 4).

Manufacturing.—31,000 establishments, 7,037,000 production workers.

Mining.—2,400 establishments, 333,000 production workers.

Public utilities.—6,300 establishments, 671,000 employees.

Wholesale trade.—8,100 establishments, 228,000 employees.

Retail trade.—25,800 establishments, 656,000 employees.

Hotels (year-round).—900 establishments, 78,000 employees.

Power laundries and cleaning and dyeing.—1,300 establishments, 60,000 production workers.

Security brokerage and insurance.—2,800 establishments, 112,000 employees. For manufacturing, mining, power laundries, and cleaning and dyeing industries, the data relate to production workers only. For the remaining industries the data relate to all employees except high paid executives and officials.

Data for the current and immediately preceding months are subject to revision.

Revisions have been made as follows in the data for earlier months:

Gypsum.—October 1946 to \$52.04, 47.8 hours, and 108.8 cents.

² Excludes messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies.

⁴ Cash payments only; additional value of board, room, and tips, not included.

⁵ Not available.

Trend of Factory Earnings, 1939 to January 1947

AVERAGE EARNINGS of factory workers, summarized in the accompanying table for selected months from January 1939 to January 1947,¹ are on a gross basis (i. e., before deductions for social security, income taxes, bond purchases, etc.).

Weekly earnings in all manufacturing averaged \$46.94 in January 1947—102.4 percent above the average in January 1939, 76.2 percent above January 1941, and 20.7 percent above October 1942. Weekly earnings for January 1947 increased 14.1 percent above January 1946. However, the average weekly earnings are still below the wartime peak of \$47.50 in January 1945, as the result of shorter working hours and shifts of workers from the high paid war industries to the lower paid consumer goods industries.

Gross hourly earnings in all manufacturing averaged 115.8 cents in January 1947—83.2 percent above the average in January 1939, 69.5 percent above January 1941, and 29.7 percent above October 1942.

Average hourly earnings exclusive of overtime, as shown in columns 7 to 9, are weighted by man-hours of employment in the major divisions of manufacturing for January 1941. Overtime is defined as work in excess of 40 hours per week and paid for at time and one-half. The method of estimating average hourly earnings exclusive of overtime makes no allowance for special rates of pay for work done on major holidays or the effect of extra pay for work on supplementary shifts. For all manufacturing, the average hourly earnings, exclusive of overtime, in January 1947 were 112.0 cents per hour—74.7 percent above January 1939, 68.7 percent above January 1941, and 38.8 percent above October 1942.

¹ Compare Trends in Factory Wages, 1939-43, in Monthly Labor Review, November 1943 (p. 869), especially table 4 (p. 879). For detailed data regarding weekly earnings, see preceding table.

Earnings of factory workers in selected months, 1939 to January 1947

Month and year	Average weekly earnings			Average hourly earnings			Average hourly earnings exclusive of overtime ¹ weighted by January 1941 employment		
	All manu- factur- ing	Du- rable goods	Non- du- rable goods	All manu- factur- ing	Du- rable goods	Non- du- rable goods	All manu- factur- ing	Du- rable goods	Non- du- rable goods
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1939: January.....	\$23.19	\$25.33	\$21.57	\$0.632	\$0.696	\$0.583	\$0.641	\$0.702	\$0.575
1940: January.....	24.56	27.39	22.01	.655	.717	.598	.652	.708	.589
1941: January.....	26.64	30.48	22.75	.683	.749	.610	.664	.722	.601
1942: January.....	33.40	38.98	26.97	.801	.890	.688	.751	.826	.608
July.....	36.43	42.51	28.94	.856	.949	.725	.783	.863	.696
October.....	38.89	45.31	30.66	.893	.990	.761	.807	.888	.718
1943: January.....	40.62	46.68	32.10	.919	1.017	.768	.819	.905	.726
April.....	42.48	48.67	33.58	.944	1.040	.790	.833	.916	.742
July.....	42.76	48.76	34.01	.963	1.060	.806	.850	.939	.753
October.....	44.86	51.26	35.18	.988	1.086	.824	.863	.950	.768
December.....	44.58	50.50	35.61	.995	1.093	.832	.873	.962	.775
1944: January.....	45.29	51.21	36.03	1.002	1.099	.838	.877	.965	.780
April.....	45.55	51.67	36.16	1.013	1.110	.850	.889	.976	.794
July.....	45.43	51.07	37.05	1.018	1.116	.862	.901	.993	.802
October.....	46.94	53.18	37.97	1.031	1.129	.878	.908	.991	.817
December.....	47.44	53.68	38.39	1.040	1.140	.883	.912	.997	.820
1945: January.....	47.50	53.54	38.66	1.046	1.144	.891	.920	1.005	.827
April.....	47.12	52.90	38.80	1.044	1.138	.899	.925	1.007	.836
July.....	45.45	50.66	38.59	1.033	1.127	.902	.933	1.017	.842
October.....	40.97	44.23	37.76	.985	1.063	.909	.942	1.014	.863
December.....	41.21	44.08	38.52	.994	1.066	.927	.957	1.028	.880
1946: January.....	41.15	43.67	38.75	1.004	1.070	.941	.970	1.037	.895
April.....	42.88	45.71	40.13	1.058	1.131	.988	1.027	1.102	.946
July.....	43.38	46.24	40.46	1.093	1.177	1.009	1.067	1.155	.970
October.....	45.73	48.90	42.45	1.130	1.202	1.056	1.095	1.169	1.014
November.....	45.79	48.62	42.87	1.139	1.210	1.065	1.105	1.181	1.022
December ²	46.86	49.46	44.15	1.145	1.213	1.076	1.106	1.177	1.028
1947: January ³	46.94	49.47	44.33	1.158	1.222	1.092	1.120	1.188	1.046

¹ Overtime is defined as work in excess of 40 hours per week and paid for at time and one-half. The method of estimating average hourly earnings exclusive of overtime makes no allowance for special rates of pay for work done on major holidays. Estimates for the months of January, July, September, and November, therefore, may not be precisely comparable with those for the other months, in which important holidays are seldom included in the pay periods for which manufacturing establishments report to the Bureau. This characteristic of the data does not appear to invalidate the comparability of the figures for January 1941 with those for the preceding and following months.

² Preliminary.

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Recent Publications of Labor Interest

April 1947

Economic and Labor Conditions on West Coast

California looks ahead. Edited by Dean E. McHenry. (In *The Annals, American Academy of Political and Social Science*, Vol. 248, Philadelphia, November 1946, pp. 199-267. \$2 (paper) or \$2.50 (cloth) to nonmembers.)

Papers presented at a joint meeting of the Pacific Southwest Academy and the Southern California Economic Association, Occidental College, Los Angeles, June 15, 1946. An introductory article on "California in perspective" is followed by three papers each on social prospects (including housing of minority groups in Los Angeles County), political prospects, and economic prospects (including industrialization in southern California).

Postwar adjustment of aircraft workers in southern California. Washington, U. S. Bureau of Labor Statistics, 1946. 6 pp. (Serial No. R. 1864; reprinted from *Monthly Labor Review*, November 1946.) Free.

Report of the California State Reconstruction and Reemployment Commission for the period from August 1943 through December 1945 and for the year 1946. Sacramento, 1947. 103 pp.

In addition to summarizing the activities of the Commission and its recommendations, the report reviews the status of California's economy with particular reference to population, employment, income, industrial and commercial growth, and construction, and discusses immediate and long-range prospects.

Small business and the community: A study in Central Valley of California on effects of scale of farm operations. Report of Special Committee to Study Problems of American Small Business, United States Senate, 79th Cong., 2d sess., prepared by Walter R. Goldschmidt. Washington, 1946. 139 pp., maps, charts. (Senate committee print No. 13, 79th Cong., 2d sess.)

Detailed comparison of a small-scale farming area and a large-scale area, with conclusions favorable to former as regards number of people supported per dollar volume of agricultural production, labor requirements, standard of living, physical and cultural services, and other factors.

Summary of California statutory provisions conferring quasi-legislative functions upon State administrative agencies. Prepared for California Legislative Committee on Administrative Regulation. Sacramento, State Printing Office, 1946. 128 pp.

Functions touched upon include those of agencies dealing with labor matters.

Individual incomes of civilian residents of California, by counties, 1939-46. San Francisco, California State Chamber of Commerce, 1947. 35 pp., charts; processed.

Union labor in California, 1945. San Francisco, Department of Industrial Relations, Division of Statistics and Research, 1946. 38 pp.

Characteristics of union locals shown in part I include distribution of union members by industry, number of women members, and changes in male and female membership, 1944-45. Part II deals with collective-bargaining agreements and reproduces selected clauses on holidays, paid vacations and sick leave, severance notice and pay, and night-work differentials.

EDITOR'S NOTE.—Correspondence, regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices were readily available, they have been shown with the title entries.

733

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Wage rate differentials—comparative data for Los Angeles and other urban areas. By Ruth Macfarlane. Los Angeles, Haynes Foundation, 1946. 164 pp., bibliography; processed. (Research memorandum No. 1.) \$1.50.

The report is described as an effort to bring together available data on the wage-rate structure of Los Angeles County for comparison with other urban areas of the United States. Emphasis is placed upon the detailed occupational wage-rate data compiled during the war by the U. S. Bureau of Labor Statistics. The study indicated higher wages in the Great Lakes region and the Pacific Coast region than in other sections, but generally lower rates in Los Angeles County than in the other three major Pacific Coast urban areas of San Francisco, Portland, and Seattle. Differentials in cost of living over the country were found to be much smaller than differentials in wages.

Digest of Oregon labor laws, 1945. [Salem], Bureau of Labor, [1946?]. 71 pp.

Twenty-second biennial report and industrial directory of the Bureau of Labor and Wage and Hour Commission of the State of Oregon, from July 1, 1944, to July 1, 1946. Salem, [1947?]. 73 pp.

The industrial directory takes up 53 pages of the pamphlet, and lists 4,655 firms by type of business and county. The brief Bureau of Labor report contains data on work permits for minors, collection of wage claims, and apprenticeship.

Labor force and employment. Seattle, Office of Unemployment Compensation and Placement, 1946. 11 pp., maps; processed.

Estimates of the labor force and employment, by industry groups, in Washington State, April 1940, July of 1944 and 1945, and January, April, and July of 1946.

Child Labor

State child-labor standards: A State-by-State summary of laws affecting the employment of minors under 18 years of age. By Lucy Manning and Norene Diamond. Washington, U. S. Department of Labor, Division of Labor Standards, Child Labor and Youth Employment Branch, 1946. 182 pp. (Child-labor series, No. 2.) Free.

Child labor laws of Georgia. Atlanta, Department of Labor, 1946. 8 pp.

Child-labor-on-farms program in operation [in New York] during summer season, 1946: Section I, Day-haul program; Section II, Migrant farm workers. New York, Department of Labor, [1947?]. 99 pp., map; mimeographed.

Family Allowances

Family allowances. Washington, National Catholic Welfare Conference, Family Life Bureau, [1946]. 19 pp.

The discussion is in the form of answers to specific questions as to the nature and extent of family allowances, their potential usefulness, and other points.

Some observations on the Canadian family allowances program. By Edward E. Schwartz. (In *Social Service Review*, Chicago, December 1946, pp. 451-473. \$1.25.)

Account of operation of the program, which became effective in July 1945, based on information obtained by the author (member of staff of U. S. Children's Bureau) from administrative officials, together with a review of results of and attitudes toward the program as reflected in interviews with a variety of observers, including social workers, school officials, and representatives of employer and labor groups.

Memorandum on the effect of the Family Allowances Act [of Great Britain], 1945, on the Workmen's Compensation Acts, 1925 to 1945. London, Ministry of National Insurance, 1946. 9 pp. 2d. net, H. M. Stationery Office, London.

Housing

Housing. (In *Law and Contemporary Problems*, Vol. XII, No. 1, Durham, N. C., winter 1947, pp. 1-208, charts. \$1.)

This special issue devoted to different phases of housing includes articles on the housing shortage, the housing program for veterans, technical potentialities in home construction, and legal aspects of cooperative housing.

Housing and construction. Report of chairman of complaints subcommittee to Special Committee to Study Problems of American Small Business, United States Senate, 79th Congress, 2d session. Washington, 1947. 33 pp. (Senate subcommittee print No. 15, 79th Cong., 2d sess.)

The report is divided into three parts. Part I presents findings and recommendations; Part II deals with the original veterans' housing program and the new national housing program; Part III gives information on noteworthy housing activities of several local groups.

A housing program for America. By Charles Abrams. New York, League for Industrial Democracy, 1947. 32 pp., bibliography. 25 cents.

A 10-point program for slum clearance and the provision of decent, modern homes for all through public and private enterprise. The author states there is need for 4 million dwelling units immediately and 12 to 18 million in the next 10 years.

The American Legion housing program. Indianapolis, American Legion, 1946. 28 pp.

Contains the findings of the American Legion's special national committee on veterans' housing, and a program, based on these findings, which has been adopted by the national executive committee of the Legion.

Report of the United States Advisory Housing Mission to the Commonwealth of the Philippines. Manila, 1946. 40 pp.; processed. Limited free distribution by U. S. National Housing Agency, Washington.

Critical examination of legislation and policies with respect to housing and related problems in the Philippines, and recommendations concerning steps to be taken in the formulation and execution of a long-range housing program.

Report of inquiry into the housing of the working classes of the city of Dublin, 1939-43. Dublin, Government Publications Sale Office, [1945?]. 279 pp. 3s. 6d.

Bilan intermédiaire de la politique suisse en matière de logements. A propos de la politique suisse en matière de logements: Un bilan intermédiaire qui est plutôt un règlement de comptes. (In *Revue Syndicale Suisse*, organe mensuel de l'Union Syndicale Suisse, Berne, May 1946, pp. 227-236; July-August 1946, pp. 273-289.)

Survey of housing in Switzerland during World War II with some comparison with World War I, including statistics of new units built from 1914 to 1919 and 1939 to 1945. Policies followed by Federal and communal governments are evaluated.

Industrial Accidents and Workmen's Compensation

Work injuries in the United States during 1945. Washington, U. S. Bureau of Labor Statistics, 1947. 23 pp., charts. (Bull. No. 889; reprinted from September 1946 Monthly Labor Review, with additional data.) 10 cents, Superintendent of Documents, Washington.

Annual report on industrial accidents in Illinois for 1945: Part I, Summary of industrial injuries reported in 1945 as compensable under the Workmen's Compensation and Occupational Diseases Acts. Chicago, Illinois Department of Labor, Division of Statistics and Research, 1946. 89 pp.; processed.

A statistical study of all accident and occupational disease claims filed with the Industrial Commission of Ohio during the calendar year of 1945 with a summary of the years 1936-45, inclusive. Columbus, Industrial Commission of Ohio, Division of Safety and Hygiene, 1946. 27 pp.

Estadística de accidentes del trabajo. Buenos Aires, Dirección de Estadística Social, 1946. 65 pp., charts; processed.

Statistical analysis, with text discussion, of accidents in Argentine industry, transportation, services, etc., 1939 through 1944. There is also a summary of the principal legislation in regard to workmen's compensation for industrial accidents and occupational diseases.

Report of the 1946 convention and annual meeting of the Industrial Accident Prevention Associations, Toronto, April 8 and 9, 1946. [Toronto?], Industrial Accident Prevention Associations, [1946]. 152 pp.

Petroleum industry safety standards, 1946 edition. Oklahoma City, Department of Labor, Bureau of Factory Inspection, [1946?]. 130 pp., diagrams, illus. (Book No. 11-A.)

Industrial Relations

Collective bargaining with associations and groups of employers. Washington, U. S. Bureau of Labor Statistics, 1947. 14 pp. (Bull. No. 897.) 10 cents, Superintendent of Documents, Washington.

Guarding the flanks: Collective bargaining in 1947. By E. H. Van Delden. (In *Personnel*, New York, January 1947, pp. 230-249. \$1.)

Examines and evaluates, from the standpoint of management, the important issues in collective bargaining for 1947, and makes suggestions as to the position that should be taken by management in regard to them.

Industrial peace and the Wagner Act: How the act works and what to do about it. By Theodore R. Iserman. New York, McGraw-Hill Book Co., Inc., 1947. 91 pp. \$1.50.

The author states that the National Labor Relations Act has not promoted industrial peace but has fostered unionization. In his opinion, a policy of more collective bargaining and less striking should be the aim.

Industrial relations policy: Proposals to modify the law and practice of industrial relations, and analysis of selected bills. By Gustav Peck. Washington, U. S. Library of Congress, Legislative Reference Service, 1947. 94 pp.; processed. (Bull. No. 48.) Available (free) only to libraries.

Analytical background intended to clarify 1947 Congressional proposals on labor relations. Includes sections on national experience with collective bargaining, changes suggested in Federal and State bills, and discussion of major bills of the 79th Congress pertinent at present.

The labor crisis—its causes and cures. (In *Factory Management and Maintenance*, New York, January 1947, pp. 67-88, chart, illus. 35 cents.)

Contains a statement of labor problems faced, an evaluation of certain existing labor laws and their shortcomings, and proposals that have been made for revision of these laws. Polls as to the wishes of factory workers on labor legislation are summarized and the views of management and labor leaders are quoted. The article closes with a summary of the action Congress is likely to take.

The question of outlawing the closed shop. (In *Congressional Digest*, Washington, February 1947, pp. 35-64. 50 cents.)

Reviews briefly the history of the closed shop, Federal and State action against it, and anticlosed-shop bills pending in Congress, and presents pro and con statements by representatives of Government, management, and labor.

Reconversion in industrial relations. By Bryce M. Stewart and Walter J. Couper. New York, Industrial Relations Counselors, Inc., 1946. 70 pp. (Industrial relations monograph No. 13.) \$1.75.

The writers distinguish between the reconversion of the Nation's industrial plant to a peacetime basis and the reconversion of industrial relations, which, they assert in the foreword (dated November 15, 1946), has only begun. It is stated that the study "is designed as an aid to management in this phase of reconversion."

Union agreements in the cotton-textile industry. Washington, U. S. Bureau of Labor Statistics, 1947. 64 pp., charts, illus. (Bull. No. 885.) 20 cents, Superintendent of Documents, Washington.

Classified provisions of 40 collective bargaining agreements for wage earners in the iron and steel industry. Classified provisions of 24 collective bargaining agreements for white collar workers in the iron and steel industry. New York, American Iron and Steel Institute, 1946 and 1947. 737 and 294 pp.]

Labor dispute settlements in the telephone industry, 1942-45. Edited by Pearce Davis and Henry J. Meyer. Washington, Bureau of National Affairs, 1946. 300 pp. \$6.

Statement on the economic considerations affecting relations between employers and workers. London, Ministry of Labor and National Service, 1947. 9 pp. (Cmd. 7018.) 2d. net, H. M. Stationery Office, London.

This official statement was issued with the endorsement of the National Joint Advisory Council, representing British employers and trade-unions. It outlines the serious economic position of Great Britain, and stresses the need for the most economical and efficient use of manpower and the necessity for keeping costs and prices steady. It calls upon both sides to raise output, increase the efficiency of industry, eliminate restrictive practices, and extend and develop joint consultation between management and work people on production problems.

International Labor Conditions

International Labor Conference, 28th session, Seattle, 1946—record of proceedings. Montreal, International Labor Office, 1946. xxviii, 411 pp. \$3 (paper) or \$4 (cloth). Distributed in United States by Washington Branch of I. L. O.

Third labor conference of the American states which are members of the International Labor Organization, Mexico, April 1946: Record of proceedings. Montreal, International Labor Office, 1946. 308 pp. \$3. Distributed in United States by Washington Branch of I. L. O.

International labor legislation. By Henri Binet. (*In Canadian Bar Review*, Ottawa, December 1946, pp. 847-860; also reprinted.)

While national laws based on international agreements were enacted many years before the International Labor Organization came into existence, the writer points out, the nearest approach to international labor legislation today consists of the conventions or recommendations of the International Labor Conferences. Early labor laws and agreements and certain early international conferences are discussed briefly, but the article deals mainly with the International Labor Organization and its work.

Suggested charter for an international trade organization of the United Nations. Washington, U. S. Department of State, 1946. 47 pp. (Publication No. 2598; Commercial policy series, No. 93.)

The proposed charter includes employment provisions which recognize the duty of member states to promote full domestic employment and to avoid measures which would create unemployment in other countries. Detailed suggestions are made concerning trade policies, business practices, and organizational arrangements.

The world parliament of labor: A study of the International Labor Organization, its past achievements and potentialities for the future, and proposals for its reorganization. By R. J. P. Mortished. London, Fabian Publications, Ltd., and Victor Gollancz, Ltd., 1946. 41 pp., bibliography. (Fabian Society research series, No. 113.) 2s.

Labor Organizations and Conferences

Directory of labor organizations in Kansas. Topeka, Department of Labor, October 1946. 84 pp.

Report of the proceedings of the 61st annual convention of the Trades and Labor Congress of Canada, Windsor, Ont., September 18-26, 1946. Ottawa, Trades and Labor Congress of Canada, [1947?]. 444 pp.

Thirty-fifth annual report on labor organization in Canada (for the calendar year 1945). Ottawa, Department of Labor, 1947. 90 pp., charts.

Report of the 45th annual conference of the Labor Party, Bournemouth, June 10-14, 1946. London, Labor Party, 1946. 255 pp. 2s. 6d.

Medical Care and Health Insurance

Recent State legislation concerning prepayment medical care. By Margaret C. Klem. (In Social Security Bulletin, Federal Security Agency, Social Security Administration, Washington, January 1947, pp. 10-16. 15 cents, Superintendent of Documents, Washington.)

Recent legislation in a number of States, it is pointed out, places the future of voluntary, nonprofit, prepaid medical-care plans largely under control of the medical profession to the exclusion of other groups. State legislation governing nonprofit medical-care corporations, enacted during 1945 and early 1946, as well as before 1945 in selected States, is summarized.

Le décret du 26 novembre 1946 sur l'organisation des services médicaux du travail. By Henri Desoille. (In Revue Française du Travail, Ministère du Travail et de la Sécurité Sociale, Paris, January 1947, pp. 8-12.)

Analysis of law of October 11, 1946, which requires trade-unions and industrial, commercial, and other establishments in France to institute medical services with doctors in attendance.

The Manitoba health plan. By Ivan Schultz. [Winnipeg, Ministry of Health and Public Welfare, 1945.] 40 pp.

Address by the Minister of Health and Public Welfare describing the purposes of the Manitoba Health Services Act of 1945, together with the text of the Act.

Erkända sjukförsäkring, år 1944. Stockholm, Pensionsstyrelsen, 1946. 77 pp., map.

Statistical review of operations of registered sickness-insurance funds in Sweden in 1944, covering membership, frequency and duration of cases of illness, and financial status of each fund. It is shown that 48.6 percent of the adult population of towns and 42.7 percent of the adult population of the provinces were members of registered funds in 1944. A summary of the Swedish text is given in French.

Occupations and Occupational Adjustment

Choosing an occupation: Recent books and pamphlets in the reference department of the New York Public Library. Compiled by Alice E. Plowitz and Martha L. Hackman. New York, Public Library, 1946. 22 pp. 35 cents.

Employment opportunities in aviation occupations: Part 2, Duties, qualifications, earnings, and working conditions. Washington, U. S. Bureau of Labor Statistics, 1947. 45 pp., illus. (Bull. No. 837-2.) 20 cents, Superintendent of Documents, Washington.

Establishing and operating an air-conditioning and refrigeration business. By V. C. Kylberg, William L. Beck, Howard E. Way. Washington, U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, 1946. 84 pp., plans, illus. (Industrial (small business) series, No. 59.) 20 cents, Superintendent of Documents, Washington.

Businesses dealt with in other reports recently issued in this series include book stores; bookkeeping services; brick and tile manufacturing; gift and art shops; jewelry stores; laundries; mail-order business; motor courts; music stores; paint, glass, and wall-paper stores; print shops; restaurants; sporting-goods stores; stationery and office-supply stores; weekly newspapers; and small wood-working shops.

Dentistry as a professional career: A brochure for the use of guidance officers and prospective dental students. Compiled and edited by Harlan H. Horner. Chicago, American Dental Association, Council on Dental Education, 1946. 68 pp., bibliography.

Manual of job descriptions in the cotton textile industry [in Australia]. Melbourne, Department of Labor and National Service, Industrial Welfare Division, 1946. 90 pp., illus.; processed.

Job evaluation. By Forrest Hayden Johnson, Robert W. Boise, Jr., Dudley Pratt. New York, John Wiley & Sons, Inc., 1946. 288 pp., bibliography, charts, forms. \$3.75.

Tells how to establish and maintain an industrial job-evaluation program, estimate the cost in terms of increased pay roll, evaluate jobs, assign workers to jobs, etc.

Prices, Price Control, and Rationing

Price control laws and executive orders as amended August 1946. Washington, U. S. Office of Price Administration, 1946. 65 pp. 15 cents, Superintendent of Documents, Washington.

Wholesale prices, 1944. Washington, U. S. Bureau of Labor Statistics, 1947. 125 pp. (Bull. No. 870.) 20 cents, Superintendent of Documents, Washington.

Canadian wartime price controls, 1941-46. By K. W. Taylor. (In *Canadian Journal of Economics and Political Science*, Toronto, February 1947, pp. 81-98. \$1.)

Report of the Wartime Prices and Trade Board, Canada, January 1, 1946, to December 31, 1946, including important developments up to February 1, 1947. Ottawa, 1947. 92 pp., charts.

Prices in the Soviet war economy. By Harry Schwartz. (In *American Economic Review*, Menasha, Wis., December 1946, pp. 872-882. \$1.25.)

Two categories of prices are discussed: (1) the relatively stable prices of raw materials and commodities produced for the government; and (2) the highly unstable, wartime inflated prices of unrationed consumers' commodities in the "free market" and in commercial stores. Current Soviet price policy of merging the two categories of prices into one is discussed.

An experimental study of rationing. By R. A. McCance and E. M. Widdowson. London, Medical Research Council, 1946. 61 pp., bibliography, charts. (Special report series, No. 254.) 1s. net, H. M. Stationery Office, London.

Description and results of an experiment to determine the effects on health of drastic food rationing.

Production and Productivity of Labor

Production outlook, 1947. Washington, U. S. Office of Temporary Controls, Civilian Production Administration, 1947. 44 pp., charts; processed.

The human aspects of methods improvement. New York, American Management Association, 1947. 50 pp. (Production series, No. 170.)

One of the five papers in the pamphlet discusses workers' attitudes toward cost reduction and methods improvement, and another tells how a labor leader (the vice president of the United Automobile Workers of America) looks at management's efforts to lift output.

Industriell produktionsstatistik, 1945. Copenhagen, Statistiske Departement, 1946. 202 pp. (Statistiske meddelelser, 4. række, 129. bind, 1. hæfte.)

Contains information on quantity and value of production in Denmark, and on employment by age and sex of workers, for 74 industry groups. A translation in French of the table of contents and French equivalents of the heads and other text of main tables are provided.

Reconversion

Postwar economic policy and planning: Reconversion experience and current economic problems. Eleventh, and final, report of Special Committee on Postwar Economic Policy and Planning, U. S. House of Representatives. Washington, 1946. 115 pp., charts. (Union calendar No. 855; House report No. 2729, 79th Cong., 2d sess.)

Review of progress made in the return to a peacetime economy in the United States, and of the economic problems which remain, with recommendations of the committee. One chapter is on employment and unemployment.

La main-d'œuvre et le plan de modernisation. (In *Revue Française du Travail*, Ministère du Travail et de la Sécurité Sociale, Paris, January 1947, pp. 32-53.)

Comprehensive study of manpower necessary to achieve levels of production recommended by reports of various committees of the French Planning Commission of Modernization and Reequipment of Industry (popularly known as the Monnet plan). This study by the manpower committee shows not only the estimated number of workers necessary to attain the production goals set for 1946, 1947, and 1950, but also the possible sources of increased manpower (immigration from Algeria and foreign countries, and use of liberated prisoners of war, of women not heretofore in the labor market, of older workers, and of workers newly trained for productive industry), the need for longer hours of work, improved employment service, occupational training, better working conditions, medical services, incentive payments, creation of model enterprises, and education of the worker.

Le rôle de la classe ouvrière dans la rationalisation du travail. By Georges Lefebvre. (In *Revue Française du Travail*, Ministère du Travail et de la Sécurité Sociale, Paris, January 1947, pp. 4-7.)

Discussion of the influence of invention, technology, division of labor, business enterprise, etc., on the rationalization of industry. Points out (with an eye on the works committees authorized in 1945) that only through increased production will workers attain shorter hours, easier work, and what they desire in a redistribution of wealth.

The battle for output, 1947. London, Central Office of Information, 1947. 49 pp., charts. 6d. net, H. M. Stationery Office, London.

Describes the British Government's method of economic planning, reviews progress in reconversion during 18 months, and outlines targets for 1947 in respect to manpower distribution, exports, imports, and home production. Brief sections are devoted to certain basic industries and services, including coal, power, steel, railways, shipping, agriculture, building, and capital-equipment projects. Next to the "central problem" of coal and power, the report states, is the problem of expanding, allocating, and increasing the output of the labor force.

The pamphlet incorporates the full text of the White Paper (Cmd. 7046) entitled "Economic survey for 1947."

Men, management, and machines. (In *Planning*, a broadsheet issued by P E P (Political and Economic Planning), No. 260, London, January 3, 1947, pp. 1-24. 25 cents, New Republic, 40 E. 49th Street, New York.)

The targets for production and the over-all tasks which the British economy has undertaken to perform, both at home and abroad, are set forth and contrasted with the manpower available for performance. Various estimates (the majority of which have already appeared in other sources) of trends in productivity in different industries since before the war are summarized, and the causes of lowered productivity reviewed. The pamphlet warns that Great Britain cannot afford to reduce working hours to 40 a week unless output is increased.

Social Security (General)

Federal welfare legislation, 79th Congress, 1945-46: Legislation relating to social security. Washington, Federal Security Agency, Social Security Administration, Library, 1946. 82 pp.; mimeographed.

Includes digests of all bills presented, as well as of those enacted into law, in social security and related fields.

The 1946 amendments to the Railroad Retirement and Railroad Unemployment Insurance Acts. By Jack M. Elkin. (In *Social Security Bulletin*, Federal Security Agency, Social Security Administration, Washington, December 1946, pp. 23-33, 49, 50. 15 cents, Superintendent of Documents, Washington.)

For the first time in this country, it is pointed out, a major group of industrial workers and their families are protected under a unified Federal program of social insurance covering old age, disability, death, unemployment, and sickness (including maternity). Each of these types of insurance is discussed in the article and there is a detailed summary of benefit provisions of the Railroad Retirement Act, as amended.

La situation financière des assurances sociales. Paris, Ministère du Travail et de la Sécurité Sociale, Centre d'Études et de Statistiques, 1946. 6 pp. (Notes documentaires et études, No. 288; série française, XCI.)

Financial report on operation of social-insurance organizations in France, showing receipts and expenditures for sickness, maternity, invalidity, old-age, death, administration, etc., for two periods—1930-40 and 1941-44—with some explanation of financial details on the general system, and on sickness and old-age insurance, since January 1, 1945.

Incidenza degli oneri sociali sul salario. (In *Notiziario della Confederazione Generale dell'Industria Italiana*, Rome, January 5, 1947, pp. 4-8.)

Analysis of the costs of social insurance (for invalidity, old-age, tuberculosis, unemployment, and other insurances) borne by the wage-earner in Italy, 1938, 1942, 1945, and 1946, with some detail on various types of bonuses received by such wage-earners.

Les rentes et la manière de les calculer. (In *Revue Syndicale Suisse*, Union Syndicale Suisse, Berne, January 1947, pp. 17-27.)

Shows different types of annuities provided under terms of the Swiss old-age and survivors' insurance law (which is subject to national referendum in early 1947), and methods of calculating them for couples, widows, orphans, etc.

Unemployment Insurance

Claimants [for unemployment benefits] awaiting recall—their special problems of availability and suitability of work. By Olga S. Halsey. (In *Social Security Bulletin*, Federal Security Agency, Social Security Administration, Washington, October 1946, pp. 8-15. 15 cents, Superintendent of Documents, Washington.)

State decisions on availability for work, and on suitable work and good cause for its refusal, reveal marked differences in the policies applied to cases of laid-off workers, the writer states. She suggests that information from the employer on the duration of the lay-off would clarify certain situations which threaten disqualification of the claimant for benefit.

Unemployment insurance goals—1947: Recommendations for improving State legislation. (In *Social Security Bulletin*, Federal Security Agency, Social Security Administration, Washington, January 1947, pp. 5-10. 15 cents, Superintendent of Documents, Washington.)

Addressed to State agencies administering unemployment compensation, these proposals for the most part discuss broad phases of the system, including coverage, amount and duration of benefits, and disqualifications and eligibility for benefits. Provision for temporary disability benefits under the unemployment-insurance system is recommended, as well as administrative simplification, an advisory council representing employers, employees, and the public, and a tripartite appeals board.

Unemployment benefits and beneficiaries, [railroad workers, 1945-46]. (In *Monthly Review*, U. S. Railroad Retirement Board, Chicago, January 1947, pp. 2-5.)

In the year analyzed, about 163,000 railroad workers received unemployment benefits, which averaged \$138 and reached the record sum of over 22 million dollars. Proportion of unemployed to number of railroad employees was highest in the leading mining and industrial States of the eastern half of the country.

Wages and Hours of Labor

Hours and wages of employees of water carriers subject to jurisdiction of Interstate Commerce Commission. Washington, U. S. Interstate Commerce Commission, Bureau of Transport Economics and Statistics, 1946. 104 pp.; mimeographed. (Statement No. 4629.)

The study shows trends, mainly from 1936 to 1945, in employment, hours worked, earnings per hour and per year, and output per employee, and indicates the relation of employee compensation to carrier revenue and expenses.

Wage structure, Series 2, No. 35: Copper alloying, rolling, and drawing, 1946. Washington, U. S. Bureau of Labor Statistics, 1947. 19 pp.; mimeographed. Free.

Other reports recently issued in this series, in addition to those previously noted, show wages in the manufacture of cigarettes, chewing and smoking tobacco, and snuff, 1946 (Series 2, No. 28), and of women's and misses' dresses, 1945 (series 2, No. 29).

The budget approach to wage adjustments—a case study. By Jules Backman. (In *Journal of Political Economy*, Chicago, February 1947, pp. 57-64. \$1.)

This analysis of problems involved in the budget approach to wage adjustments is based largely on the budget priced in five textile cities by the Textile Workers Union of America (CIO) in connection with its demands for higher wages in 1944.

Portal-to-portal pay. By George Edward Cotter. (In *Virginia Law Review*, Charlottesville, January 1947, pp. 44-69. \$1.)

Considers certain procedural aspects of the Fair Labor Standards Act and the components of work as defined by the courts in the cases dealing with portal-to-portal pay. The conclusion was reached that only Congress can prevent the perpetuation of what the author describes as profound injustice.

Report of the Committee on Salaries and Qualifications of Public Health Personnel, Canadian Public Health Association. (In *Canadian Journal of Public Health*, Toronto, January 1947, pp. 1-37, charts. 25 cents.)

Summarizes results of a first-hand investigation covering 144, or all but 3, of the official health agencies in Canada, and gives recommendations of the committee. Information presented shows the number and salary ranges (including revisions to October 15, 1946) of physicians, nurses, and other personnel, and factors influencing their incomes.

Salaires, prix, et leurs rapports avec la consommation. (In *Études et Conjoncture*, Union Française, Ministère de l'Économie Nationale, Institut National de la Statistique et des Études Économiques, Paris, August-September 1946, pp. 19-33, charts.)

Study of average hourly wage rates of industrial workers, coal miners, and white-collar workers in Paris and the French provinces, 1938-46, with indexes based on October 1938. As a basis for estimating the proportion of the worker's income absorbed by food expenditures, the article includes data on retail prices in Paris, and on food costs for a family of four in Paris, showing calories cost and free and black market costs.

Wages, prices, and profits. London, Labor Research Department, [1946]. 29 pp. 6d.

About two-thirds of the pamphlet is on wages and one-third on profits, there being only brief references to prices. In treating wages, the pamphlet argues for increasing wages and shortening hours in Great Britain as a means of inducing employers to install machinery and to use labor more effectively, as well as a means of preventing unemployment. Discussion of the relation between wages and the drive for production stresses the need for proper classification of skilled workers, and for a fair differential between time rates and piece rates where payment by results is used. The conclusion is reached that £5 is the minimum adult weekly wage needed for a family.

Payment of wages for holidays. (In *Ministry of Labor Gazette*, London, December 1946, pp. 344-348. 6d. net, H. M. Stationery Office, London.)

Summary of provisions of collective-bargaining agreements or statutory orders concerning paid vacations and holidays in British industries.

Union scale of daily wage rates in Jewish establishments [in Palestine]. (In *General Monthly Bulletin of Current Statistics*, Department of Statistics, Jerusalem, December 1946, pp. 716-719. 4s.)

Daily wage rates prevailing in manufacturing industries and construction in Jerusalem, Tel-Aviv, and Haifa at the end of September 1946, based on an 8-hour workday.

Wage rates in agricultural occupations [in Palestine], during the summer seasons of 1945 and 1946. (In General Monthly Bulletin of Current Statistics, Department of Statistics, Jerusalem, December 1946, pp. 711-715. 4s.)

Ranges in money wages of skilled and of unskilled workers in major types of work are shown for Arab agricultural labor (in Arab and in Jewish employment) and for Jewish agricultural labor.

General Reports

Thirty-fourth annual report of the Secretary of Labor, for the fiscal year ended June 30, 1946. Washington, U. S. Department of Labor, 1947. 218 pp. 40 cents, Superintendent of Documents, Washington.

Branches of the Department of Labor whose work is covered in the report include the Apprentice-Training Service, Bureau of Labor Statistics, Children's Bureau, Conciliation Service, Division of Labor Standards, U. S. Employment Service, Retraining and Reemployment Administration, Shipbuilding Stabilization Committee, Wage Adjustment Board, Wage and Hour and Public Contracts Divisions, and Women's Bureau.

63d annual report of United States Civil Service Commission, fiscal year ended June 30, 1946. Washington, 1946. 46 pp., charts.

The report shows that on September 30, 1946, the executive branch of the United States Government had 2,469,860 civilian employees—2,154,109 in continental United States and 315,751 in Territories, possessions, and foreign countries. Executive departments in Washington, D. C., had 225,983 employees. Activities of the Commission reviewed in the report include services for veterans, placement of physically impaired persons, and administration of the retirement acts coming under its jurisdiction.

Investigaciones sociales, 1943-45. Buenos Aires, Dirección de Estadística Social, 1946. 281 pp., charts; processed.

Subjects covered by this volume of Argentine statistics include employment and unemployment, wages and hours, collective-bargaining agreements, strikes, labor organizations, industrial accidents, prices, and cost of living.

Verslag over de werkzaamheden van de Stichting van den Arbeid in de periode Mei 1945-Mei 1946. The Hague, Stichting van den Arbeid, [1946?]. 53 pp.

The first comprehensive account of operations of the Netherlands Labor Foundation (composed of employer and labor representatives), which was conceived during the German occupation of the country and set up immediately after its liberation. The report reviews the general economic situation during the first year of liberation, outlines the wage policy of the Government, and indicates the activities of the Foundation in the fields of wages, hours, vacations, and social insurance. The Foundation is also assisting in planning the future organization of industry in the Netherlands.

The evolution of the Netherlands Indies economy. By J. H. Boeke. New York, Institute of Pacific Relations, Netherlands and Netherlands Indies Council, 1946. 180 pp. (I. P. R. international research series.) \$2.

Reviews the influence of western economic penetration and colonial policies upon native agriculture and enterprise, with special emphasis upon the period since 1929 and upon the governmental policies initiated to cope with the depression. A chapter on welfare and social care includes information on the cooperative movement, money lending, contract labor, unemployment-relief measures, and European labor in the Netherlands Indies. Control of wages is discussed in a chapter on regulation of the price level.

Annual report on the Department of Labor and on the resettlement of ex-servicemen [in Nigeria], 1945. Lagos, 1946. 36 pp. 1s. 6d., Government Printer, Lagos, and Crown Agents for the Colonies, London.

L'évolution de la situation économique dans les pays étrangers: Pologne. (In *Études et Conjoncture, Économie Mondiale*, Ministère de l'Économie Nationale, Institut National de la Statistique et des Études Économiques, Paris, November 1946, pp. 47-73, map.)

General survey of the national economy in Poland since the war, with a section on the labor force and wages and one on prices and price policy.

Ekonomiska utredningar vðren 1946. Stockholm, Konjunkturinstitutet, 1946. 99 pp., charts. (Meddelanden, series B, No. 6.)

Contains three studies: a review of the price situation, a forecast of the possible trend of national income to 1951, and a survey of building and construction during the war years, in Sweden. A summary in English and English translations of the table of contents and certain other items are furnished.

Konjunkturläget hösten, 1945. Stockholm, Konjunkturinstitutet, 1946. 74 pp. (Meddelanden, series A, No. 13.)

This review of the economic situation in Sweden includes data on employment, wage and salary payments, individual incomes, and consumption in 1945, and national income (preliminary figures) in 1944, with comparative data for earlier years.

The Tasmanian economy in 1945-46. Hobart, State Finance Committee, 1946. 22, xvi pp., charts. (Studies of the Tasmanian economy, No. 24.)

Analyzes trends in production, employment, and social services. Appendixes give statistics of employment, prices (indexes), and wages (indexes) in 1945-46, and value of production in 1944-45, with comparative data for earlier years.